A Monthly Agricultural Journal, Designed to Benefit the Planter, Farmer, Gardener, Fruit Grower and Stock Raiser.

VOL. 9: MARCH, 1857. NO. 3.

GENUINE CHINESE HEMP SEED !!

We are just in receipt of a lot of this celebrated Hemp Seed, which we are prepared to furnish at $10 per bushel. Its peculiarities are that it flourishes on poor land and produces nearly twice the quantity per acre that the common hemp does. It has been successfully cultivated in Woodford county, Ky., for two years past.

Orders promptly attended to.

MUNN & BUCHANAN,
no3.3t 485 Main street, Louisville, Ky.

Important to Farmers, Planters and Traders.

THE WAKEFIELD HAND CORN PLANTER. Retail price Five Dollars. The Western Corn Planter Company, have now perfected their arrangements for supplying this valuable labor-saving machine. They offer them in perfect confidence that they will at once supply a substitute for all the old, slow and expensive modes of planting, and believe they will come into general use throughout the West.

The exclusive sale for Counties and Townships can be had on application to the Company. The Planters are 12 in one box, and will be forwarded at our wholesale price for one dozen and over. Circular and directions with each machine.

Orders should be sent at an early day, and address all communications to

THADDEUS SMITH,
No. 84, Main street, between Locust and Olive,
no.3. 2t. Saint Louis, Mo.

PENNOCK'S PATENT

WHEAT DRILL!

This machine is simple and durable. It is not injured by coming in contact with roots and rocks. It saves from one to two pecks of seed to the acre. It causes a yield of three to eight bushels over the old method, which difference is produced by leaving a ridge of soil between the rows. The plant is thereby protected and invigorated during the winter, instead of being thrown out as in broadcast.

The supply last season was not equal to the demand. To insure a machine the coming season, order early.

TERRELL & BUCHANAN, Manufacturers,
Cor. Franklin Avenue and 20th st. St. Louis.

PEACH TREES. We have on hand, for spring sales, a large stock of the above, consisting of a few of the best varieties, which we offer as follows:

Yearling trees, 1st size,.....$70 00 per 1000.
" " 2d size,..... 50 00 per 1000.

For general assortment of Nursery Stock, see advertisements and Catalogues. ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, New York.

☞By a typographical error in the spring edition of our "Wholesale Catalogue," Peach trees were designated as "two years old," instead of one year, as intended.
no. 3. 1t. E & B.

Pure Chinese Sugar Cane Seed.

The subscribers have just received of Mr. Jonas Gyer, his crop of this seed, raised in this State. It is for sale by the bushel or pound at a reasonable price. On the receipt of one dollar we will mail, and pre-pay postage on same, enough seed to plant two-thirds of an acre in hills 3½ by 2 feet apart; this will give 3 to 4 seeds in a hill. Address Wm. M. PLANT & CO. St. Louis, Mo.

EVERGREENS, EVERGREENS.

ELLWANGER & BARRY, having an immense stock of Norway Spruce, offer them in quantities at the following very low prices—all transplanted, strong and bushy plants:

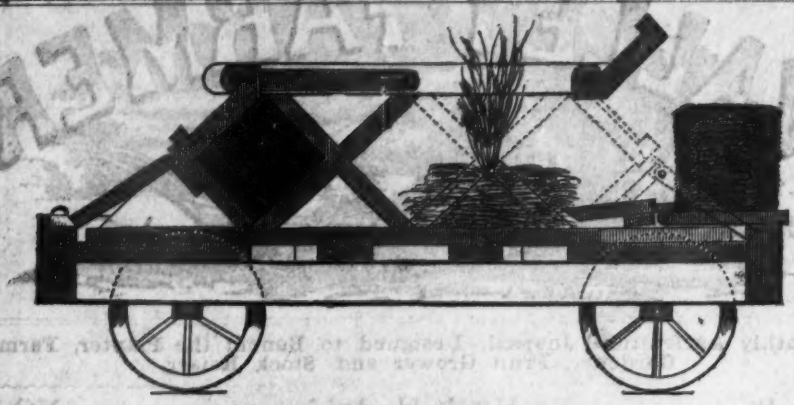
5 feet	$50	per 100,	$400	per 1000	
4 "	30	"	250	"	"
3 "	22	"	200	"	"
2 "	15	"	140	"	"
1½ "	12	"	110	"	"
1 foot	8	"	60	"	"
6 inches	5	"	45	"	"

Wholesale Catalogues for spring of 1857, now ready, sent to all who enclose a post stamp.

ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y. Jan. 3t.

1,000 BUSHELS OF FRESH MACLURA SEED!

We have now on the way from Texas the above named quantity of superior seed of the new crop. The present ulimited and unceasing demand for plants induced us to make every effort to procure seed sufficient for our own use, as we were early apprised of the lightness of the crop. By the activity of our agents in Texas, we have secured almost the entire yield. The seed are expected to arrive by the first of February, and will be promptly shipped to previous orders, from Bloomington, St. Louis and Cairo. Persons wishing FRESH seed should send us their orders immediately, with plain directions for shipping, as delay will result in disappointment. Our price will be reasonable, as we have adopted the motto of "Cash sales and small profits." Explicit directions will be given, and seed prepared for vegetating, for those who desire it. Address OVERMAN & MANN,
Bloomington, Illinois,
or MUDD & HUGHES, Commission Merchants,
feb.56, 2t, St. Louis, Mo.



MANNY'S PATENT
PORTABLE HAY AND COTTON PRESS.

PATENTED APRIL 17, 1855.

Manufactured and for sale by H. B. HOWARD, at the Manny Reaper Warehouse, 6th st. near Main,
LOUISVILLE, KENTUCKY.

Being a horizantal vibrating lever press, constructed on wheels; may be drown fram place to place, and is worked with great facility, the hay being put in at one end of the press, while the bale is being hooped at the other, and *vice versa*, pressing a bale at each vibration or movement of the follower; no time being lost in running back the follower; consequently, the hooping and filling may be continued without interruption, which makes it capable of doing a great amount of work. Those who purchase hay for shipping, will find it just the thing that will save them both time and money, and its convenience for pressing hay before it is stored in barns, must make it apparent to all that it is designed to fully meet the wants of the public. The following premiums have been awarded this press, viz: First Premium at the Stephenson County Fair, at Freeport; Ill. State Fair at Chicago, first premium; and at the Indiana State Fair at Indianopolis, first premium; and many other recommendations might be referred to, a few of which are inserted below:

LOUISVILLE, KY. H. B. HOWARD.

NOTICES OF THE PRESS, AND OPINIONS OF OTHERS.

ARTICLES ON EXHIBITION.

Among a number of articles on exhibition at the County Fair last week, we noticed a few that are specially worthy of commendation on account of their manifest adaptation to the wants which they propose to fill, and worthy the attention of our farmers. Among these we note MANNY'S PATENT HAY PRESS. This press was invented by Pells Manny, of Wadam's Grove in Stephenson county, and patented in April, 1855. It strikes us as a very valuable implement, and one that must come into very general use. It is a horizontal double-acting press, in which a bale of hay is pressed by each movement of the lever, while the action of the lever is such that the slow motion of the windlass is dispensed with. It is set upon wheels, and can easily be moved by a span of horses or yoke of oxen, while all the fastening necessary in locating it is simply blocking the wheels. The machinery of this press is really so simple, and so little liable to disarrangement, and at the same time so effective in its operation that we see no reason why it should not soon come into general use. The utility of the work which it is designed to do is apparent to all. Hay pressed is much more valuable than hay unpressed, both for feed and for convenience in storing, and in a country so finely adapted to grazing, pressing must became very general. We understand that Mr. Manny designs taking a model of his press to the State Fair, where it will no doubt receive asmuch attention as it did at our County Fair.—[Freeport Journal.

NEW AND IMPORTANT INVENTION.

Mr. P. Manny, of Stephenson County, father of J. H. Manny, Esq., of this city, has invented and patented a kind of hay press entirely different from any now in use. The press was on exhibition at the State fair. The Chicago "Times" thus speaks of it:

It consists of a large box, of sufficient strength, mounted on wheels, so that it may be driven to any part of the field, and the hay pressed into bales, without being taken out of the meadow at all. Within the box is a moveable partition, worked by an outside lever, which presses the hay into bales at either end of the box. While one bale is being removed the other end is being filled, so that the machine works without interruption. It is calculated to press from twenty to fifty tons per day, and requires two or three men and a horse in the operation.

my.tf [Rockford Republican.

E. J. COLMAN, Editor and Publisher,
Saint Louis, Missouri.

H. P. BYRAM, Editor and Publisher,
Louisville, Kentucky.

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Persons residing in Kentucky and contiguous States, will address H. P. BYRAM, Louisville, Ky.

AGRONOMY;

OR THE SCIENCE WHICH RELATES TO THE CONSTITUENT PARTS AND PHYSICAL PROPERTIES OF THE SOIL, &c.—NO. 9.

PEAT.

Peat is a species of humus, composed of the remains of plants in a state of greater or less decomposition. It is found in greater abundance in some sections of the country than in others. In the limestone regions of the West, so subject to subterranean drainage, ponds and swamps, suited to the accumulation of peat, are not so frequently met with as in the Atlantic States, where in some places immense deposits are found. In Europe and in some parts of our own country it is extensively used as a manure, both in its natural state, incorporated with other materials, and after being submitted to a burning process, and converted into peat charcoal. But it has recently been ascertained, by Dr. Davy and others, (contrary to former opinions) that in its natural or unburnt state, it is a much better absorbent of ammonia, when used in stables and yards with the excrements of animals, than it is in the form of charcoal.—There are, however, in many places in our Western country, small deposits of peaty matter that will in a future period, be found valuable in augmenting the manure heap. The large deposits of peat are usually found in low, moist situations, where mosses, lichens, and other plants grow, which are with difficulty decomposed. These become interwoven and united with the mud and various substances deposited by the water, the vegetable portions putrify and gradually lose their organic texture, and are at length united with other substances in a compact, spongy mass. When the putrefaction is so far advanced that the organic tissue is totally destroyed, the peat is neither more nor less than a kind of humus, that is to say, a sour humus.

The circumstances under which peat is formed are subject to considerable variation: the position of the soil with respect to the surrounding country and especially with relation to the neighboring lakes and rivers; the degree of humidity which these latter engender; the nature of the plants which constitute the elements of the peat, and lastly the substratum of the soil—all these things may differ in different places; and hence, without doubt arise all the varieties which we find existing in peat. The peat has not been formed all at once, but gradually and in successive layers; when one generation of plants perished, another sprang up from its ashes, and thus the mass has been gradually increased.

The greater the degree of decomposition of the vegetable fibers, the more nearly does peat assimilate to humus. The only difference which exists between it and the humus which is found in fields, forests and uncultivated places, is in the cause to which it owes its existence. Besides, humus which is formed by the decomposition or putrefaction of vegetable bodies, is not exposed to so continuous a state of humid-

Thus it is with our garden beets, raddishes, cabbages, turnips, &c. In saving any of these plants to produce seed, not only should the choicest and most perfectly developed specimens be chosen, but no two varieties, of the same family should be allowed to stand near each other, or even in the same garden, unless it be a very large one. The vine family are particularly liable to degenerate, if more than one variety is planted in the same neighborhood. Bees are always busy, when these are in blossom, gathering the pollen, of which the *bee-bread* is formed; in flying from one blossom to another with their legs loaded with this fine dust, it comes in contact with the pistils in the productive flowers of other varieties which are thus fertilized, and the product from that seed is a new or sub-variety, generally inferior to that from which it sprung. Practical seed-growers understand this, and arrange their gardens and plants accordingly.

Indian corn, by far the most important cereal now cultivated, is extremely liable to "mix," if planted near any other variety. The dust or pollen being light is wafted by the winds across whole fields. It is in this way that an almost endless number of varieties have been multiplied. Among these there are some that experience has proved to be more valuable and productive than others. Those kinds that generally mature their ears sound, and that contain the greatest amount of nutriment, should be selected, unmixed, for seed, and none but the largest, best formed ears from the most productive stalks, should be chosen. And if more than one variety is desired on a farm, they should be planted far apart, or at different periods, so as to avoid simultaneous blossoming and prevent any admixture or cross-fertilization. If this course was pursued, the aggregate of the corn crop of the country might be increased many millions of bushels annually.

It is very seldom that wheat or oats can be obtained unmixed with other varieties. The constant sowing with these mixed varieties, continues to produce sub-varieties, ripening at different periods, which tend to a constant deterioration in both quality and quantity; when, on the contrary, if a little care and labor were bestowed in selecting unmixed varieties, and these only of the best, the product probably might be doubled.

Sometimes, in fields of grain that have been sown with seed in which there is a mixture of more than one variety, it happens that a plant is discovered of extraordinary development of stems and grain, which have resulted from a favorable cross of two varieties so constituted as to produce this result. The product of these have sometimes been preserved and carefully planted and have proved to be new and valuable varieties. If a little care were taken in preserving such plants, when discovered, and the produce sown and carefully cultivated, most valuable acquisitions might be secured. Loudon mentions an instance worthy of record for the encouragement of others. He says: "*Marshall* (Yorkshire) mentions a case in which a man of *accurate* observation, having in a piece of wheat perceived a plant of uncommon strength and luxuriance, diffusing its branches on every side, and setting its closely surrounding neighbors at defiance, marked it, and at harvest removed it separately. The produce was 15 ears, yielding 604 grains of a strong-bodied, liver-colored wheat, differing, in general appearance, from every other variety he had seen. The chaff was smooth, without awns, and of the color of the grain; the straws stout and reedy. These 604 grains were planted singly, nine inches asunder, filling about forty square rods of ground, on a clover stubble. The produce was two gallons and a half, weighing 20 1-2 pounds, of pure grain for seed, besides some pounds for seconds. One grain produced 35 ears, yielding 1235 grains; so that the second year's produce was sufficient to plant an acre of ground."

"But," says Loudon, "*the most systematic mode of producing new varieties*, is by crossing two sorts, as in breeding; that is, by impregnating the female organs of a blossom of another variety of a different quality. Thus, supposing a farmer was in the habit of cultivating a very good variety, which he wished to render somewhat earlier, let him procure, in the blossoming season, from a very early soil, some spikes of a very early sort, just coming into blossom, and let him put the ends of these in water and set them in the shade so as to retard their fully blossoming till the plants he has destined to become the females, come into flower. Then let him cut out all the male organs of the latter, before they have advanced so far as to impregnate the stigma; and having done this, let him dust the stigma with the blossoming ears of the early male parent. The impregnated stalks must then be kept apart from other wheats, that the progeny may be true. When the grains ripen let him sow the best, and from the produce, when ripe, select the earliest and finest spikes for seed. Let him sow these, and repeat the choice until he procures a bushel or two of seed.

ity as peat; the earth of the soil with which it is mixed acts upon it, while that substance does not exist at all in peat, properly so called. In a great number of cases, peat is very much like acid or sour humus; indeed it sometimes resembles it so strikingly that it is impossible to distinguish these substances apart. Peat, like sour humus, contains acetic and phosphoric acid and ammonia.

The constituent parts of turf, like those of humus, are carbon, hydrogen, nitrogen and oxygen. All peats do not contain an equal quantity of carbon. The older the peat is, the more of this substance does it possess; and as, when used for burning, its quality depends upon the quantity of carbon contained in it. When exposed in a dry place and mixed with lime, it becomes decomposed, is freed from its acidity and transformed into a mild, fertilizing humus. In this form, incorporated with the droppings of the barn yard and stables, it constitutes a most excellent manure, and should always be employed in this manner when it can be procured within reasonable distance of the farm.

This number closes the series of articles which we have given upon the constituent parts and properties of the soil, the material portions of which we have gathered from "Thaer's Principles of Agriculture."

SEEDS AND SEEDING.

Seed time is again near at hand. The subject of seeds and seeding has not received that consideration among the farmers and gardeners, that its importance demands.

From the great book of geology, everywhere spread out before us, we learn that the first forms of vegetable life were extremely simple, and the number of varieties very few; but thro' successive periods of countless ages of time, not only have their numbers been greatly multiplied, but their structure has become more complicated, and the quality of those intended for the sustenance of man have been greatly improved.

That the germ of organic life came forth upon the earth from the inorganic elements in the simple form of a *single cell*, and according to the theory of some naturalists, the whole fulness of the vegetable world, as we now view it, has been gradually developed out of this *single, simple form*, and its descendants, by gradual formation of varieties, which become stereotyped into species, and they in like manner become the producers of new forms, until we have arrived at the present state of perfection, we do not believe. But we have undoubted evidences that many of our choicest fruits, vegetables and grains, have been improved by the art of man, from inferior, wild specimens, which would not be recognized as the parents of those now cultivated by us. For instance, the delicious peach is the result of the cultivation of the wild, bitter almond. The apple is said to have originated from the wild crab; and so of the pear and cherry from their inferior varieties It is claimed that the potatoe originated from the poisonous Night Shade. The great variety of the cabbage tribe—the Broccoli, the delicious and melting Cauliflower, and the rich Savoy are but the effect of cultivation upon the dry and nauseous, bitter-flavored Colewort. This is evident from the fact that they can readily be converted into it again by neglect of cultivation and allowing them to run wild. So has the saccharine, delicate, orange colored Carrot been produced from the woody spindle of the root of the wild carrot.

It is asserted by competent authority, that all our common cereals have been brought to their present perfect condition by cultivation, from grains having in their natural state, scarcely any resemblance to those now cultivated; and Wheat, the most valuable and perfect of all, was produced from a wild grass, found on the shores of the Mediteranean, known to botanists by the name of *ægilops*. This has been demonstrated by the experiment of M. Fabre, in our own time, a detailed account of which will be found in the Journal of the Royal Agricultural Society, of England.

From careless cultivation, the tendency of all kinds of improved vegetation, is to go back, or degenerate into its natural or wild condition—to fall off in quantity as well as quality of product. A thousand apple or peach trees may be grown from seeds taken from the choicest specimens, and the product of nine hundred and ninety-nine in a thousand will probably prove inferior to the parent fruit.

How Varieties may be kept Pure and Improved.—It is from proper selection and careful and thorough cultivation, and crossing by artificial impregnation, that improved varieties are produced.

The cultivation of *different varieties* of vegetables, fruits or grains of the *same species*, in the vicinity of each other, results in *promiscuous* impregnation, either through the agency of bees or other insects, which live upon the honey and pollen from the blossoms, or the wind, that produce hybrid varieties, which almost invariably prove inferior to either of the parents.—

This operation has been successfully performed by T. A. Knight, and though it may be reckoned too delicate for farmers in general, it will be looked on by the philosophical agriculturist as not improbably leading to results as important as those which have attended the practice in the case of garden fruits and flowers."

We have not now at hand the result of any well conducted experiments that have been made with the view to test the comparative productiveness of different varieties of the same grains. But Mr, J. W. Jones, of New York, was furnished last spring, by Col. B. P. Johnson, secretary of the New York State Agricultural Society, with a number of varieties of new seedling potatoes, which were planted on the 21st of May and the product dug on the 16th of October. They were all planted on soil of the same character, and the experiment seems to have been conducted with care and accuracy. The result shows a great diversity in the product, varying from 111 bushels per acre, at a rate of increase five bushels from one planted, to 897 bushels per acre, at a rate of fifty and a half bushels from one planted.

Now, we believe, that from carefully conducted experiments with almost any of the different varieties of vegetables and grain, a similar difference would be the result. Such a difference would well pay the labor of making a proper selection of seeds, and of keeping them pure.

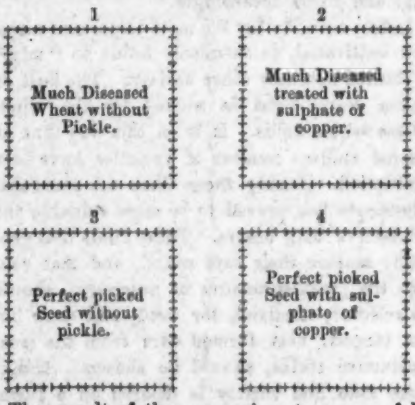
Experience has also established the fact that certain varieties of the same grain are better suited to certain kinds of soil, even in the same vicinity than others are.

In making choice of seed for a field crop, say of wheat, rye or oats, not only should the best varieties be selected, but that which is made up of full, well-matured grains, free from all kinds of foul seed. Grain for seed, should always receive extra care in cleaning, and none but the best fans should be used. There are those that are now manufactured with a change of riddles, which may be so adjusted as first to remove all the noxious seeds, and then the light, chaffy grains. No half-filled seed should be allowed to vegetate in the field; the product of such is seldom half the ordinary yield of that from well filled grains; such occupy the ground to no profit, while they check the growth and development of the more healthy and vigorous plants. We believe that in almost any crop of wheat, oats, &c., of one hundred acres, the advantages of thoroughly cleaning and separating the seed in the manner we have stated, would more than equal the price of the best seed fan.

The solution of various substances, such as the caustic alkalies, copperas, arsenic, &c., are recommended in which to soak wheat, for seed, with the view to prevent smut and other blight, to which this grain is liable. The blight is caused by a fungus which vegetates upon the wheat plant, and these various solutions are supposed to destroy the sporule or seeds of this fungus.

In a prize Essay by James Buckman, F. G. S., F. L. S. Professor of Geology and Botany in the Royal Agricultural College of England, it is asserted by the author and proved by an experiment made by him, which we detail below, that the beneficial action of these substances depends upon their destroying the germinating power of mal-formed, immature and diseased seeds. He says:

"Abut three years since I planted four plots of wheat, in the following order :—



The result of these experiments was as follows:

Plot 1.—Much of the seed germinated, but the crop was much blighted both in straw and grain; in fact, scarcely a perfect ear of the latter.

Plot 2.—A very small quantity of the seed germinated, the few resulting ears were free from blight.

Plot 3.—Germinated with a good and clean resulting crop.

Plot 4.—The same result as plot 3."

These xperiments show that the pickling of wheat destroys the seed so as to prevent germination when the seed is diseased or ill-formed; but if perfect seed were always employed, no pickling is at all necessary, it being perfectly true that a diseased progeny must result from an imperfect stock in plants, no less than in animals.

The same laws operate in the vegetable kingdom that do in the animal kingdom. The ad-

vantages of propagating from none but the best animals, are now to apparent to require even a reference to the subject, and we would be glad to impress upon the attention of every farmer the importance of equal care in the selection and preparation of seeds.

It is a very common practice among farmers, after having raised one variety of grain upon the same farm for several years, to procure some from a distance, in order to "change the seed," under the impression that their's has *run out*. With a proper selection of varieties suited to any particular soil or locality, with care in keeping the seed unmixed, there would be no *running out* or deterioration of varieties. But from a careful selection of the best filled and most perfectly developed grains from the most productive heads, any variety may be perpetually improved. We know from the experience of twenty years, this to be true, with certain kinds of seeds, and we believe it will be found so with all.

Responsibility of Dealers in Seeds.—The seed business in many of the cities in the Union, has become a very important one. The farmer no longer depends upon his neighbor for many of the seeds he intends to sow, but upon the merchant of the city or town. In no department of trade does there rest a greater responsibility than upon the seedsman, and there is none (if we except that in liquors) that affords greater temptation to men of "easy integrity" than that in seeds. Farmers and gardeners are frequently liable to gross imposition by unprincipled seedsmen, either from being furnished with a spurious article, or with seeds so old that their vitality has departed. There are very few seeds that the unpracticed eye can determine whether they are five years old or only the growth of last year. In planting a crop of garden vegetables, or in seeding fifty or a hundred acres of grass, hemp, or any other crop, with old or unsound seed, it is not the loss alone of the amount that has been paid for seed, that is to be so much considered, although this may be great, but the disappointment in the loss of the crop, and the derangement, in a well established system of rotation, is many times greater than the mere cost of the seed. It is in garden seeds, hemp seed and the grasses, that farmers and gardeners are most liable to imposition. We have known hundreds of acres of hemp to be lost in consequence of the sale of seed so old that not one seed in a bushel would vegetate. And so more frequently with garden seeds. Not long since we referred to a branch in the trade that has sprung up in a kind of grass seed which is grown nearly upon the Canadian border and shipped to the West in large quantities and distributed to dealers in every section of the country, and sometimes immediately back to the very neighborhood where it grew, under the name of "Extra cleaned Kentucky Blue Grass Seed." This seed is of a nature that renders it susceptible of being separated from the chaff, as the genuine article cannot be, and hence it is imposed on the public as a superior article, and sold at double the ordinary price. But while there are instances of this character to be met with, we are pleased to know there are many honorable exceptions with men who have established a reputation and a business, of which they may well be proud. It is with such that the farmer should seek to deal.

In the introduction of any new vegetable or grain, there are always those to be found ready to impose upon the credulity of the public, by false representations in regard to its quality or productiveness, as in the case of the wonderful *Dioscorea Batatas*, or Chinese Yam, that was so speedily to annihilate its Irish predecessor, and many others that might be named. As the conductors of a farmers' journal, we deem it not only our province but our duty to put the farmer upon his guard against impositions like these, as much as it is to furnish him information upon the subject of the best crops or the most improved implements and machines.

Quantity of Seed per Acre.—After obtaining the best seed, and properly cleaning it, the next important requisite is to apply it to land that is thoroughly prepared to receive it, and in the proper quantity. The quantity of seed necessary for an acre, varies somewhat with circumstances, according to the strength of the land to be sown, and the comparative size of the grains of any particular variety. The very general practice among farmers in the West, is to sow too little seed, even less to the acre than is deemed necessary by the European farmers, or those of the Eeastern States of this Union, where the climate is more favorable to a less quantity than it is with us. In sowing the seed of the grasses, we are sure our Western farmers greatly err in this respect. The following is the quantity of seed we should recommend per acre, viz:

Wheat—From six to eight pecks per acre.
Rye, Common—Five to six pecks per acre.
Rye, Multicole—Two to three pecks per acre.
Barley—Eight to ten pecks per acre.
Oats—Six to eight pecks per acre.

Millet—For hay, from five to six pecks; for seed, one to two pecks per acre.

Buckwheat—Two to three pecks per acre.

Hemp—Four to five pecks per acre.

Flax, for the lint—Two to four pecks per acre, for seed alone, from one and a half to two and a half pecks per acre.

Clover—One bushel to six acres.

Timothy—One bushel to four or six acres.

Orchard Grass—Four teen to twenty pounds per acre.

Blue Grass—Twelve to sixteen lbs per acre.

ROOT CROPS.

Sugar Beets or Mangel-wurtzel—If put in with a drill, four pounds per acre.

Turnips and Ruta Baga—With a drill, one pound per acre.

Carrots—Two pounds per acre.

Vitality of Seeds.—The vitality of seeds, with proper care and under favorable circumstances, can be depended on for the following periods: Indian Corn, Wheat, Rye, &c., for *two years*. Of course every farmer will sow fresh seed when it is possible to obtain it of equal quality.

Millet, Buckwheat, and the grasses generally, will grow the *second year*, if saved over with proper care, bnt not with the certainty and vigor of fresh seed.

Hemp will grow the second year, only when kept dry, and in a small quantity together, and not exposed to too great heat.

Parsnips, Rhubarb, and other thin, scaly seeds, for *one year*.

Carrot, Cress, Leek, Onion, Peas, Pepper, Sage, Salsify, Tomato, for *three years*.

Asparagus, Egg Plant, Lettuce, Mustard, Parsley, and Spinach, for *three years*.

Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Raddish, Sea Kale and Turnip, *four years*.

Beet, Celery, Cucumber, Mellon, Pumpkin, and Squash, from *eight to ten years*.

CHINESE SUGAR CANE---ITS CULTURE, &C.

This newly introduced plant is now producing quite a mania in the farming community, and in order to gratify the earnest wishes of a great number of our readers, we shall endeavor to furnish them from time to time all the light upon the subject of its culture, the manufacture of sugar, &c., that we may be possessed of.

The United States is naturally a corn growing country. Perhaps on no part of the globe is the climate better adapted to it, than in the more temperate portions of the United States, and the Chinese sugar cane is so nearly allied to the Indian corn, in the character of its growth, that we think the climate will be equally suited to it.

Perhaps nothing of the vegetable kind has for a long time been introduced that will prove of greater value to the country than this new plant, even should it not fully meet the sanguine expectations of many who place a high estimate on it for the production of sugar, for it will nevertheless prove a most valuable article of forage for all kinds of farm animals, and particularly for "soiling" purposes. But however well adapted it may prove to the production of sugar and molasses, it can hardly be expected that every family will find it profitable to enter into their manufacture, any more than they do in the sugar producing portions of our country, from the common cane, but we shall be glad should it prove otherwise.

Should this plant be as valuable for the production of sugar and molasses as some anticipate, its introduction at this time, may be regarded as providentially opportune, in view of the rapid decline in the production of sugar in the sugar producing portions of the United States within the last few years. The quantity of sugar now produced from an acre, in Louisiania, is hardly one-quarter what it was at the earlier periods of its introduction. We do not know that we can assign the true cause of this decline, but we think it not unlikely that it will be found to result from exhaustion of the soil by injudicious cropping, and from a deterioration in the quality of the cane, owing to the improper method of its propagation, being entirely from cuttings or joints of the cane, and these of the immature portions, while that which is more ripe is used for grinding and the manufacture of sugar. In order to arrest this rapid decline in the produce of American Sugar, the government has fitted out a vessel which has already sailed under the direction of the managers of the Patent Office, to procure sugar cane cuttings from abroad, to take the place of the deteriorated stock now planted in the South.

Our knowledge of the manufacture of sugar or syrup from the Chinese cane, is extremely limited, but few experiments having been made during the past season, and these upon a small scale, and in rather a rude manner. The largest quantity of syrup made, we believe, was by Col. Richard Peters, of Atlanta, Ga. Some persons in Illinois and other States, have made smaller quantities of syrup, which has been pronounced by competent judges to be superior in flavor to

that furnished by Col. Peters, and fully equal to the best maple syrup. From what has been done, we hope, from the multiplied experience, the coming season, a very superior article of syrup, if not of sugar, will be made. But there is much yet to be learned in regard to the treatment of the growing plant, in order to produce the greatest amount of saccharine matter, as well as to the stage of its development best suited to secure that object. Col. Peters made his syrup from canes that had matured their seed, and some contend that neither the quantity nor the quality are affected by this course. But, judging from the laws of vegetable physiology, as well as from analogy, we are satisfied that both quality and quantity are materially impaired. The cane is said to yield from 30 to 50 bushels of seed per acre; all the starch that this seed contains, (because starch is but sugar in another form) has extracted just so much of the saccharine from the cane that would otherwise be available for the production of sugar. We therefore contend that the seed-heads should be removed as soon as they have flowered, or before. The proper period for cutting, we should consider, is when the juice is most concentrated and mature, or when the seed, had it remained, would have passed the milky state, or be nearly ripe. These and many other important points in the manufacture, are to be determined by experience. We rely more upon the information we shall derive from the present season's operations in France than from what we shall gather at home.

HISTORY OF THE CHINESE SUGAR CANE.

The seeds of this plant were introduced into the United States from France in 1854 by Mr. J. D. Browne, who was in that country in that year on a mission from the U. S. Patent Office, for collecting seeds and Agricultural information. He there saw a small field of it growing and secured 200 pounds of the seed, which was, during that winter, distributed throughout the several States. The seeds were sent to France some six years ago from the north of China, by M. de Montigny, to the Geographical Society of Paris.

The following year, while on a similar mission, Mr. Browne obtained several bushels of the seed of this plant, grown from that said to have been brought from South Africa, by Mr. Leonard Wray, of London, which proves identical with that of Mr. Browne's importation in 1854.

The Chinese sugar cane, or sugar millet, (*sorghum saccharatum*) is one of a great variety of similar plants found in different portions of the globe. Mr. Vilmorin, of France, says, that in a collection of seeds sent to the Museum of Natural History, of Paris, in 1840, by M. d' Abadie, there were thirty kinds of *sorghum*, several of which produced stems of saccharine flavor.

CULTIVATION.

The Chinese sugar cane is similar in its habits and growth to the Indian corn and broom corn, and the same preparation of soil and the same cultivation are required. It is a vigorous growing plant, and is said to thrive well even on poor soil. As the supply of seed for the present season is limited, we would suggest that it be planted in rows four feet apart, with one or two seeds dropped in each hill, from one to two feet distant. The young plants are rather delicate, resembling the common broom corn. We will repeat the precaution, that no varieties of the same family—say the broom corn, Guinea corn &c., be allowed to grow near or in the same field with it. It is recommended by some to remove the superfluous shoots or suckers as they appear, where the object is to grind the canes. When grown as a crop for feeding stock, if cut about the time the plants are in blossom, a second growth will spring up. From its habits in this respect, it is possible that in a tropical climate, the roots may be perennial, or at least, biennial.

HARVESTING, PRESSING AND BOILING.

As we have stated, we believe it will be found that the most proper period to cut the corn, will be just previous to the maturity of the seed, but experience must prove how much before, and how long after this period, will answer. The pressing and boiling should go on simultaneously with the cutting, particularly if the weather is warm. The leaves should be stripped and the tops of the canes cut off before they are run through the mill. The kind of mill that has been recommended for pressing the cane, is similar to the old fashioned cider mill, with the rollers smooth, and united with cog wheels upon each, of equal diameters. The rollers may be 15 or 20 inches in diameter. Iron is undoubtedly better, but wood will answer by way of experiment. If two sets of rollers were arranged, so that the cane would pass immediately from between one set into the other, the pressing would be more effectual. But should the sugar or syrup be found profitable for home manufacture, portable mills of proper construc-

tion will undoubtedly be made and for sale at the agricultural warehouses. We have heard of experiments in grinding and pressing the cane in a small way, in the common portable cider mills.

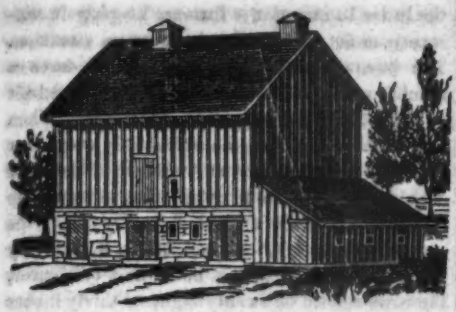
The boiling must follow without delay after the juice is expressed, otherwise fermentation will follow and spoil the juice. Each cane is said to produce on an average about a pint of juice, and four quarts of juice will make about one quart of syrup. The boiling may be carried on more rapidly in flat pans or those kettles with the broadest surface exposed to the heat; but any one familiar with boiling maple syrup can arrange these. The heat should be applied moderately, increasing until the syrup is brought to a simmer, but below the full boiling point, until the scum rises to the surface and forms into puffs. When this ceases to rise it should be removed, when the boiling may proceed more actively. Where the operation is to be continued to any considerable extent, other kettles should be conveniently arranged, into which the syrup at this stage could be transferred, for further concentration, and the first kettle employed again with a slower fire. It is considered by some that lime is necessary to clarify the syrup and neutralize the acid, while others think it is not important. When used, it is recommended to prepare it as follows: Take a half peck of lime, slake it in a bucket of water gradually added, stir it well and strain through a cloth; let it settle for half a day; pour off the water and dry the powder. Of this, half a teaspoonful to two teaspoonfuls to every five gallons of juice may be added, after the scum has been removed. The precise degree of concentration must also be determined by experiment.

Prof. J. J. Mapes, editor of the *Working Farmer*, who has long been engaged in the business of sugar refining in the city of New York, makes the following suggestions in the November number of that work, in regard to the manufacture of sugar from the Chinese sugar cane:

"The apparatus for clarifying, concentration, etc., should be so constructed as to insure the greatest rapidity of action. In a small way brass kettles may be used; but for larger operations, requiring new ones to be constructed, they should be of copper. The use of alkalies in clarifying has long been known, and their excessive use often injures the quality of the the results. The operator should supply himself with three kettles, two large and one small. The juice, as soon as expressed, should be placed in one of the large kettles, and to which should be added—say ten gallons—half a teaspoonful of cream of lime, one pound of finely ground and freshly burned bone-black, and two ounces of bullock's blood, or the whites of two eggs, or half a pint of skim milk, either will do. The blood or eggs, if used, should be beaten, and then divided throughout the mass, stirring all cold, and during the early part of the heating. The process in this kettle should be conducted somewhat slowly, and if the the kettle be large enough to permit all the scum to rise without overflowing it, the scum need not be removed, as it will remain on top of the fluid, becoming more and more compact The juice should not be allowed to boil or simmer. After the clarification is perfect, the scum on top will crack open in all directions, and white, sparkling bubbles will rise through these cracks, overflowing the top of the scum, and it will turn over in masses. The scum may be taken off and the juice thrown on a blanket in an open basket, thus partly filtering the mass.

"It should then be placed in kettle No. 2, and boiled as rapidly as possible until a thermometer placed in it will indicate 220 degrees of Fahrenheit, when it should be again filtered. The first portion passing the filter should be returned, as it will not be quite clear. The whole will then be bright, and may be put into kettle No. 3, which need be but half the size of the others, and should be placed on a clear, strong fire, and so arranged that it can be readily taken from the fire at short notice. Place in this kettle a thermometer—it will commence boiling at 220 degrees, and gradually increase to 240 degrees; the instant it reaches that point it should be taken from the fire suddenly, for if permitted to rise to 241 degrees, or more, it can never be purged. Let it stand in this kettle until a slight crust commences to form on the sides and top, then scrape this down with a wooden spatula, thin at the end and edges, and stir all until evenly mixed with the more fluid portions; then pour into a conical sugar mould, stopped at its lower end, and place the nose of this mould on a drip-pot. This sugar-mould should be of the kind known as the Bastar-mould, and it and the drip should stand in a warm place. The next day the sugar in the mould will be solid, and the plug in the bottom of the mould may be withdrawn and an incission made upward with a pegging-awl, replacing the mould on the drip-pot. The sugar or mollasses will gradually drip from the nose of the mould into the pot, and the time necessary for this purging will depend upon the heat of the apartment where it is placed; usually the syrup will all run off in the natural way in a week or ten days, leaving the sugar in the mould of a bright straw color. If the operator desires to make the sugar white, he may do so by the process of claying, or liquoring."

The ground canes, as well as the leaves and tops, make excellent food for stock, of which, most kinds are extremely fond. There are also other uses to which the plant is applied, but of this we shall not now speak.



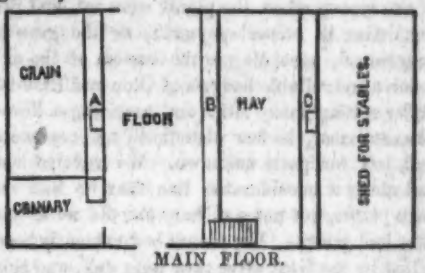
SIDE HILL AND CELLAR BARN.

Every farmer needs a good barn. It is just as essential as a good house. But few Western farmers, we regret to say, appreciate their importance; if they did, there would not be such a great want of them among the farmers of the Western States. Thousands of dollars would be saved annually by having them. Almost every farmer loses enough each year by not having one, to erect one. Nothing is a better indication of a good farmer than a large, well-built barn. Indeed a barn is the first requisite to good farming. No one who has enjoyed the benefits of a good barn will ever consent to be without one.

The above plan is from the Rural Register, which will do for a moderate sized farm. For larger farms the same general plan could be followed, only making it larger. We shall in the course of a month or two, give another plan of a barn.

"The object of this plan is to furnish a good barn for a farm of moderate size, or of about seventy five to one hundred acres, occupied with mixed husbandry, but where raising animals, dairying and grazing have a full share. This barn will accommodate five horses, seven cows, and will afford shelter for a large quantity of hay and grain in the straw, and has a bay for straw and a cellar for roots below. A carriage house, tool-room, &c., are supposed to be nearer the dwelling, and small sheep barns are built separately, consisting simply of a twenty feet square box and roof for hay, with a low shed at one side, and a space beneath it for sheltering the sheep.

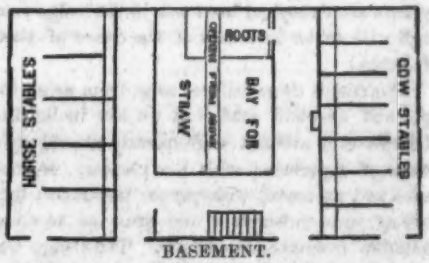
The main portion of the barn is about 30 by 40 feet. The plan showing the main floor nearly explains itself. On one side of the threshing floor is a bay for unthreshed grain, with a granary adjoining and on the other is a large bay for hay. The timbers or poles across from beam to beam overhead, will admit the storage of a large quantity of corn fodder, hay or grain. Beneath the grain bay as the basement plan exhibits, is the horse stable, the mangers of which are filled with grain troughs supplied through an opening from the main or threshing floor. On the other side of the floor is a similar opening, for throwing down the threshed straw into the straw bay beneath. On the opposite side of the hay bay is an opening for throwing hay down to the passage in front of the cow stables. This opening is made by means of a row of studs or poles, placed perpendicularly on that side, three feet from the end of the barn, and the hay, when deposited is only built out to this line of studs. By means of a flight of stairs from the floor above, easy access may be had from above to the passage in front of the stables. The space in front of the horse stables, and the doors opening to it outside are sufficiently wide to admit a wagon backed in far enough to be easily loaded with grain through the door above from the granary.



MAIN FLOOR.

A, opening to mangers below. B, opening to straw bay below. C, opening for hay to cows.

Between the straw bay and the cellar wall, towards the embanked side, is the cellar for roots. This is easily filled by dumping the cart containing them into the chute placed in the cellar window. They are effectually protected from freezing by being thus placed between the straw on two sides, and the embanked wall on the third, while double walls and double doors, next the cow stable passage, amply protects them on the fourth. A coating of two or three feet of straw thrown on the top, completely shuts out the frost from above.



BASEMENT.

The passage next the cow stables is wide enough to contain the root slicer, straw cutter, &c. The passage at the end of the straw bay may be made wide enough, if desired, to contain the coarser tools of the farm.

Ventilators pass perpendicularly upwards from the horse and cow stables to the peak of the barn and are shown in the exterior view.

An advantage results from making the cow stables in the form of a shed or "lean to," as it may be built quite separate from the rest of the building; and when the sills decay, which is apt to take place from the large quantities of liquid manure, they are easily renewed without disturbing the principal frame."

Hedging--the Osage Orange—Impositions and Failures.

We have been enquired of by several farmers in central and northern Kentucky, in the vicinity of Louisville, where *reliable* hedgers can be met with, who will set the Osage Orange and insure the hedge to completion.

A man by the name of Barcklay has been through several counties in the centre of the State, and contracted with a considerable number of the most wealthy farmers to plant and cultivate hedges for them, requiring a portion of the money when the plants were set, and the remainder in annual payments as the growth progressed, according to the custom of the extensive and reliable hedgers of Ohio and Illinois. After setting many miles and receiving a liberal enstalment, he has abandoned his contracts and left for parts unknown. We traveled last fall along a considerable line that he had set with plants, but not a solitary one did we notice that had grown. The plants had evidently been killed by the frost after they were dug, and this method was adopted to sell them to the best advantage.

If any agent, skilled in the business of hedge-growing, connected with any of the *responsible* hedging companies would visit this section of the State he could open an extensive business in the line of hedge making.

A number of correspondents have also written to us complaining of their want of success in making the Osage Orange seed vegetate, and others who have been equally unsuccessful with plants after theyhad been set in the hedge row, and wish to be informed of the cause of their failures.

Sometimes these failures arise from using too old and unsound seed, but we are inclined to believe they are not unfrequently caused by a want of experience with the planter. If good seed are procured, with proper treatment, they are as sure to vegetate and grow as so many genuine cucumber seeds are. The Osage Orange, however, requires a higher temperature to cause it to vegetate than almost any other plant that is grown in our climate, and hence, it is best not to plant the seed until it has begun to sprout, which will not be before the 10th or 15th of May. The best mode of preparing the seed for planting, is either to place it boxes of wet sand in the fall, or if this has not been done, the next best plan is to soak the seed three or four days, setting them in a moderately warm place, and then turn the water off and mix the seed with sand in the proportion of three or four parts of the latter to one of the former, keeping it constantly moist and setting in a warm situation. The box containing the seed should have a number of holes bored in the bottom to admit of the drainage of any excess of water. When the weather has become sufficiently warm for the seeds to show signs of vegetation, the sand should be sifted from them; they should then be planted in drills an inch deep, dropping the seed from a half to one inch apart, and if they are to be worked with a horse and cultivator, the rows should be twenty-eight or thirty inches apart. If the cultivation is to be done by hand, fifteen inches will be wide enough. Much labor may be saved in weeding, if a small ridge of earth one inch high is made over the seed when planted, and as soon as it is found that the young plants are getting up near the surface of the ground this ridge should be levelled off, by drawing a rake lengthwise of the rows, thus leaving the ground clean and mellow, giving the young plants a good start of the weeds. With *good seed*, managed in this way, none need fail in their efforts to grow them.

In regard to the causes complained of, where plants have failed to grow when set in the hedge row, we can assign but one cause, and that is evidently the true one, for there is no plant more tenacious of life, when properly handled, than the Osage Orange. Scarcely one plant in a thousand would fail to grow, if covered in any manner one inch deep with soil, if alive when covered, and when regularly planted the proportion of failures would be still less.

We presume that in every instance where these failures have occurred, the plants have been procured at the stores or of persons who either did not know how the plants should be handled, or did not care. Hundreds of thousands of these plants are brought from Illinois and sold in our market after having been frozen solid for weeks in the boxes in which they were shipped. In the spring, these plants are sold to the farmers, and of course not one in a hundred of them can be expected to grow. This we know to be the case with thousands that have been sold for several years past.

It is either best for farmers to grow their own plants, or to procure them from regular nurserymen, who can be relied on, and who will properly pack them without exposure to frost.

Correct information upon this subject, we regard as a matter of no small importance to the western farmer, and so many of them have met with unnecessary failures that they state to us that they are almost discouraged in making

further effort. We can assure them that there is nothing intricate in the matter. With judgment and careful management there need be no failure either with the seed or plants.

ADVICE to YOUNG FARMERS—No. 1.

We propose a short series of articles for Young Farmers. There are many young farmers about commencing their career, and many more soon to commence. They desire to succeed well. Much of their life's happiness and usefulness depends upon their success. They will centre their hopes and aspirations very much upon their profession. They want to be honorable men and do their share of manly duty in the communities in which they live. They want to live comfortable, make some money, make themselves good homes, rear good families, and be instrumental in sustaining the institutions of the country and the age. This is an honorable ambition. It well becomes the young farmers of America Our country looks to them for strength and support. The stirring life of this age is to draw its main nourishment from them. Honorable and useful is the place the young farmer is to occupy in the coming years. It is important then, that he should begin well.—Much depends upon a good beginning.

In securing land, stock, fruit, seed, location, implements, and whatever is wanted to make a new farmer, it is important that the best of everything be had. A good tree occupies no more room than a poor one; it requires no more nourishment from the soil, no more attention. A good animal is generally easier and cheaper kept than a poor one. A good acre of ground is by far the most profitable. Good hay, good wheat, good breeds of stock are more easily raised and more profitable, than bad. On the whole, we repeat that it is altogether best that every young farmer should start right; hence we propose to say a little here upon *the selection of his farm.*

1st. Make it a point, if possible, to locate your farm in some favorable place, as regards markets, roads, respectable society, schools, and opportunities to keep up with the improvements of the age. It is hard to be successful out of the reach of the world. It is hard to get along well and cultivate well, both a farm and a family far away from a mill, a store, a blacksmith shop, a post office, a school, a church, or the associations, privileges and incitements of good society. The price of all articles of farm product depends much upon the nearness to market and the facilities for transportation. Let these things be duly considered in selecting a locality for a farm.

2d. Seek good land; not land adapted especially to the growth of a particular article, unless that be your especial object, but a soil that will be good for all farming purposes. Poor land pays but poorly for the labor put upon it. It is actually easier to cultivate an acre of good land well, than of poor, and the profit is often double or treble. It is often that young farmers think they must have a large farm, whether it is good or not. This is a mistake. If your means are limited, buy less land. Be sure that it is good. By-and-by you can buy more of the the same sort. You generally see good, intelligent farmers on good land. See to it that the soil is good, with water, timber, rock, &c., in convenient and useable relation to it. Be careful that it is not too flat. Good drainage is important. It is one of the great desideratums of good farming. Hence perfectly flat land is objectionable. Neither should it be too hilly, for then its life will be washed out of it.

3d. It is important that the farm should have upon it a good building site—high, dry, healthy, in convenient relations to the whole farm and the road, a site well adapted to all the purposes of a farmer's home.

4th. It should have, if possible, a favorable spot for a garden and an orchard, contiguous to the building site. These are the main things to be considered in selecting land for a new farm. We deem it important that the young farmer should give good attention to them, and unite them all, as far as possible, in his farm.

[Written for the Valley Farmer.]

CHEAP BUILDINGS FOR FARMS.

Messrs. Editors:—I have never seen in your journal any hints on cheap building, and yet, I know of no subject worthy perhaps, of more attention, or which would be of greater benefit to many who read your publication. The subject addresses the emigrant, who at the least cost and in the shortest time desires a home for his family. It is important to the man of small means, who may need comfortable places for his use, which, at a high rate, he must forego. I therefore beg of you and your correspondents some communications on the subject. Meantime, I suggest, with this, a plan which I got from a respectable gentleman in St. Charles Co., Mo., who had seen it used, had employed it himself and commended it. The time needed for construction,

and expense, are about the same as for a common log house, and it is neater and more substantial, and more comfortable.

Of course you must prepare your foundation, (a cellar is optional.) Lay a set of square hewn sills, the size or dimensions desired on your foundation. Take poles, also of the height you wish your room or house to be. Having made a shoulder to each, set the poles with the shoulders on the bottom sills, fastening each one with a spike and as close together as they will stand. Saw off all, even on the top. Upon the tops of the poles so leveled, lay a set of top sills—upon which build your roof. Where the chincks need, fill them—then plaster with mortar, inside and out. This house keeps out rats, is clean and warm, may be colored with any wash and looks neat and tidy, if so furnished for a dwelling. For smoke houses, &c., it offers easy construction.

I hope the process has been made intelligible; and I should like any other hints, regarding it, or other convenient modes of building suggested. Can some one describe the frame house called "the Balloon?" T. H. N.

Written for the Valley Farmer.

FORESTS.

Extensive forests ameliorate the climate, keep the atmosphere warmer in winter and cooler in summer. A forest covered land possesses some features of an insular climate, namely: to equalize the extremes of temperature, and impregnate the air with moisture, such as large bodies of water produce. Water is slow to embody warmth, and in the same degree slow to give it off. A dense wood excludes the sun from the soil, while the living foliage has also the property of attracting and condensing moisture, whereby cold is produced. Moreover, the leaf-covered and vegetable soil or humus of the forest is like a sponge, imbibing and retaining moisture in a high degree. An open, or cultivated soil, in turn, is exposed to the direct rays of the sun and parching winds, with furrows, ditches, gullies and roads to carry off the rain swiftly into rivulets, branches, creeks and rivers to the ocean. Evaporation is accelerated by cultivation at the most rapid rate possible. A dry, heated atmosphere, arising from extensive open areas, vertically expands and expels the moisture in the upper air, as is, for instance, the case on the plains of Peru, where it *never* rains. All the moisture arising from the Pacific passes over these open, heated plains, until it strikes the Cordilleras, where it condenses and falls in the form of rain and snow. The cool atmosphere arising from a wood covered country has the same tendency to condense moisture, which it gives off by degrees from its own retentive soil. In winter, an open country is exposed to a full sweep of the coldest winds, which gain in strength and degree by large openings, while the forest shelters and protects man and beast; its leaf-covered soil seldom freezes hard. North America is already growing greatly in degree of cold, heat and drought, caused, no doubt, by the general destruction of the noble native woods. Our rivers have also partaken of the extremes of high floods and dried-up channels, until perhaps within a century the proverbial fertility of America may become a by-word of derision.

Forests are the storehouses of wealth—*wood*, *water* and *vegetable earth*. Water is the vivifying element of vegetable and animal life. Forests collect and nurse it, and give it off by degrees. The wholesale destruction of millions of acres of vegetable matter by *fire*, is an unpardonable sin against the best interests of the human family.

Thoughtless, avaricious people of the present day, you who madly destroy the wealth and beauty of this new continent, who impoverish your descendants,—bury your destructive axe for a while, and think of the sad consequences. Spare your native woods, the richest inheritance you can leave your children and grand children. Do not wantonly destroy the wealth of a nation.

Two-thirds of the immense area west of the Mississippi to the shores of the Pacific, is naturally, already an open waste, over which sweep the cold winds of the Rocky Mountains, unchecked, and which open plain can only be made habitable by the slow process of planting and seeding groves of trees. Spare, therefore, your own groves of noble forest trees, *wherever it is possible to do so*, particularly in your pastures, around your meadows, yards and buildings.—Spare your beautiful sugar-maples, elms and hickorys. Plant these trees, rather than destroy them, and nurse them with care and affection. Groves of fine trees spread health, shade, fertility, moisture and beauty over the land, and give character to a *home*. Can you picture a house without a tree, shrub, or flower near it, exposed alike to storm and weather, the glaring sun and piercing cold blasts, situated in an open field or waste, a *home*? And are there not several hundred thousand such disconsolate farm-houses scattered far and wide over this conti-

nent, on the very ground too, where the nobles patriarchs of the native woods were so sacrilegeously destroyed? No wonder, then, that half the nation is on the move from such desolate places, to others, where they only farther go to destroy and impoverish, and then leave again without a regret. Can they have a sacred feeling or love for a home, which they never knew nor enjoyed? No wonder then, at the restless feeling of this moving race. What have they to endear them to home?

The following is a translation from a German work on the influence of forests: "Shadeless lies Syria, exposed to a burning sun. It is described by the Ancients, when it was yet wood-covered, as a second Paradise! Jerusalem's surrounding country appears to the visitor of the present day, a desolate stoney desert.—Would the Israelites have had the intense longing for Palestine; would it have been the land of promise had it been the disconsolate desert of the present day? The answer gives us the Lebanon. Through the whole of the Old Testament you hear the rustling of its mighty cedar forests. Of these you see at present but a few groves of six to eight trees, the objects of reverence and adoration of christians, Jews and Moslems.

Greece, the defoliated, is a burnt-out, down-trodden country of ruins. Could the cradle of civilisation have stood here, where vegetation is already burnt-out at the end of May? Could the Hellens have attained their high art, and drawn the loveliest and loftiest pictures of imagination from the barren rocks and dried up fountains of the present? Never! For they had the holy groves of Kolonos, the oaks of Dodona, the woods of Argos and Thessalia, the forests of Mount Athos, and those which crowned the immortal Olympus. The living springs and wells around which the Myths and life played. Where are they now? The axe of the Barbarian felled the venerable trees around them, and their sources dried up. With the loss of these springs and wells, protected by these forests, out of which they sprang, themselves ruined, came the wholesale ruin of Asia Minor. The enfeebled Greeks upon the present deforested Peloponnesus, could they have withstood the armies of Xerxes as their forefathers did, who were heroes of the woods? Not far from Greece in the Caucasus, where yet flourish high crowned forests, mighty trunks with giant tops, which rise to the snow and ice fields of Kasbeck and Elbrus, have saved a people in their original freedom—the Circassians—who have heroically defied the greatest military power of the world (Russia) for more than thirty years. The Russians well know what gives power to the Circassians. They carry on war against the forests of the Caucasus. With these ruined, they know that the strength and power of the people must fall. West of the Caucasus the terrible axe of the Russian has already done its work. Of the large number of rivers cited by Strabo, *five have disappeared*, as the woods which collected them and out of which they broke forth, have been entirely destroyed." And who has seen the desolate desert around ancient Rome and a great part of Italy, without a tree or shrub to refresh the eye; that country is now a barren waste. Could the ancient Romans have derived the elements of life and strength to conquer the world from it? No, never! The deforesting of Italy tells the tale; not less that of Spain, where formerly in the woods of Asturia, the Goths gathered strength to become a world governing people. 'The birds eat the grain,' says a proverb of the Castilian peasant; 'the trees harbor birds, therefore down with all trees.' Now, the centre of Spain is a sunburnt, treeless waste, out of which the traveler despairingly hurries, to find shade and water on the coast of the sea.

EMIL MALLINCKRODT.

[Written for the Valley Farmer.]

Hedge Fences---Meeting of Hedge Growers.

MESSRS. EDITORS:—Pursuant to published notices a very respectable meeting of hedge growers was held at Jacksonville, Ill., the 27th of January, which I had the pleasure of attending.

The meeting was not large, but such persons only as we desired and expected were there.

A majority of us saw for the first time the grounds of Prof. Turner—his well arranged lots, his excellent hedges, and horticultural varieties; and I assure this privilege was by us not lightly esteemed. This gentleman, you must know, is one of our true American Noblemen. He studies out hard things, and experiments severely and at unsparing expense, but always in the direction of usefulness. He solves problems pertaining to many important matters. A just and well earned fame has caused many seekers of things new, to wait around; and many from afar to look toward him expectingly.

The *place* of our meeting, then added greatly to its interest; for here were the *first* hedges, and here all improvements of them are sought and pursued with exemplary zeal. And the

demonstration to our eyes of hedges of different ages—impassable to everything; and the history of their treatment, to which we listened, was not the least interesting part, either to consider ourselves or to tell to others.

It was set forth as a principal object of the meeting to disabuse the public mind of false representations, which have led and are leading astray multitudes, by means of cards, circulars and other forms of printed fallacy, in respect to hedge fences. That class of hedgers who itinerate rapidly, who have left hundreds of miles of slovenly work in Illinois, and turned up in Mississppi or Alabama,—with whom contracts and compliments are of the same doubtful value, had no representation at the meeting.

Many facts baneful to the general cause of hedge growing, were presented and talked over. And it was considered best to recommend that the farmers publish their own grievances and warnings upon their own responsibility, and hereafter be more careful to encourage only local hedge growers, who have good claims to confidence and have some interest in abiding in a place and fulfilling contracts faithfully. And that above all they be pursuaded as much as possible, to grow hedges *each one for himself*, following sound, practical instructions and examples, which can now so easily be found *true* and *sure*. Particular attention was recommended to the letter of Jas. McGrew, Esq., addressed to the meeting, parts of which are published herewith.

At the conclusion of the meeting, Prof. J. B. Turner, C. R. Overman, and Logan Sleeper were requested severally to write out what they shall deem important of the proceedings of the meeting for publication in our agricultural papers of Chicago and St. Louis, and by correspondence to arrange for a more full and general meeting at some suitable time not far in the future, with a view to the formation of a regular annual or semi-annual convention.

The several letters addressed to the meeting were given to my charge with instructions to publish such extracts as I might think proper and of sufficient general interest.

A few years ago the public attention was often in various ways drawn to the bold and persevering efforts of Mr. James McGrew and those associated with him, to grow hedges *extensively* in Ohio and in Illinois. Having himself made the "Premium Hedge" of the State of Ohio, it was not difficult to project a gigantic enterprise with his name at the head. They found patronge readily and made large beginnings in both States. For two years past, Mr. McGrew has employed dilligently his utmost skill in bringing the matter to the best conclusion he could. He could not attend our meeting, but wrote a long letter from which I extract as follows:

"My experience has demonstrated to me the utter impracticability of making hedge growing a safe and profitable business on a large scale, for the following reasons. 1st. Too much time is wasted in passing from place to place. 2d. Where jobs are scattering, as they have to be where only one or two in a neighborhood can be induced to lead off in the cautious experiment, it is impossible to set and cultivate *all* of a *large* quantity of hedge at the proper time. Whereas, each farmer could both set and cultivate exactly at the proper time. What a striking difference! The one plan comparatively easy; the other simply *impossible*. 3d. In nine cases out of ten farmers do not take the necessary care of the hedge which they agree to when they contract to have it grown. They will permit their stock to destroy the young hedge and tramp the ground as hard as a public road. Where they till fields they will turn teams upon it and drive over it; and if anything is said, they will reply with stoical indifference, 'I have *contracted* to have it grown for so much per rod!' 'Well, but you agreed to protect it. 'I know: but I can't help this just now; this won't make much difference. I can't well help putting my stock in here this dry weather. Pasture is very short,' &c., &c. And perhaps for the time, argument and reasoning against it may prevail, but as soon as the hedger is gone away, somebody or somebody else, will find it very convenient to forget his complaints, and expose the hedge to injury as before.

My experience warrants me in saying that in nine cases out of ten, the man who does not feel interest enough in hedging to inform himself, *grow it himself for himself*, will never take such care of it in co-operation with his hedge grower, as will enable the hedger to succeed, and bring it to completion at the earliest possible period.

4th. But besides all this, there are insufferable difficulties to the general management of hedges by quantity and by proxy, and engaging largely in growing hedges by contract. It differs from all other businesses that I know of, which have been systematized and carried on largely and thereby more successfully. In all branches of manufacturing and mechanical business there is better facility for concentration; one foreman can direct and oversee the labors or twenty-five or more, securing necessary dilligence and the certainty of having work well done. The making of railroads, buildings, bridges, &c., can be managed the same way, and each amount to a sum equal to that of scores and fifties of miles of hedges, scattered over two or three counties and requiring thousands of miles of traveling before it is completed and delivered up; and that too, extending over a term of time embracing at least four years.

"The raising of plants and the setting of plants it is proper enough to have done by men making that *a business*, but beyond that the

farmer must attend to the cultivation and trimming himself, for no one can do it for him, half so well, at three times the cost. I believe that a majority of the farmers would do well to employ some one who thoroughly understands the business to set their hedges. But if, after that they do not feel sufficient interest to protect and cultivate and trim them for themselves alone, they will not sufficiently protect and co-operate with another in the work to its earliest consummation.

And as to instructions, they are devious and equivocal, to take them 'as they run.' For to take the latest experience even of known friends, a person would have difficulty in attempting to test such a variety. But let farmers get their instructions as furnished and approved by leading agriculturists, officers of agricultural societies and State Boards of agriculture.

I have all confidence in the success of the Osage Orange as a hedge plant and of the practicability of hedging with it effectually. But I have seen so much humbuggery and bold schemes of overreaching and deception in connection with the business, that I have turned away disgusted. And I believe now, that every upright and honorable man in the business, must be equally disgusted with the strangely infectious competion that besets him in these 'big doings' of pretenders. If I were ever again to engage in the business, I would only agree to furnish plants and set the hedge, and in some cases, perhaps, trim for a specified price per rod per annum."

The following is from the letter of our well known citizens, J. & W. Sigerson, of St. Louis county, and who are not and never have been engaged in growing hedges for others:

"It is eight years since we set the first hedge on our farm. We have now nine miles of line fence; most of it was turned out at the age of three years, but some not till four years old. Our knowledge was very limited when we first commenced with it. We have managed some of it rather carelessly. We are satisfied from our experience now, that a large part of the hedges set in the states of Illinois, Indiana and Ohio, where we have been, will prove worthless, for reasons to be inferred from rules of our own, which we never withhold from any who ask for them. And here they are: 1st; In the first place the ground should be plowed twenty inches deep and ten feet wide. 2d. Great care should be taken in selecting the plants, to have them all of equal thrift and of uniform size, that they may grow all alike. 3d. They must be set in deep and firm, and never nearer together than fifteen inches and in a siugle row. 4th. Deep plowing and regular and constant cultivation, sufficient to keep the ground clean and promote the most rapid growth must be attended to. 5th. Well established roots of two full years' growth should be formed before a knife o" any kind is put to them; then cut to the ground clean. The next year cut to within six inches; the next a foot high; the next two and a half feet; the next three and a half feet, and the fence is perfect.

"We have made our best hedge by cutting back to the ground after it was four years old. We have another mile which does not please us as it is, and shall cut it also the same way this winter."

The following extracts are from the letter of Messrs. Jamison & Houston, of Spring Garden, Pettis county, Mo:

"We have been engaged in the hedging business for three years past, in Saline, Pettis and Lafayette counties. We feel a deep interest in your meeting, and all the matters which shall be considered or discussed. We are not much informed of the modes and terms of prosecuting the business in other States; but we have not found the business as profitable as we anticipated. We have about one hundred miles growing. Have found no difficulty in getting as much as we could do, and have found the scarcity and high price of labor a great obstacle to the successful prosecution of our business.

Most of the hedges set by us have been set under contract to be completed by us. We find several objections to that mode of doing. In addition to the risk of the plants dying, the hedges are frequently injured by the tramping of stock and the driving of teams over them. And as any excuse can be urged for not receiving the hedge, some men are disposed to postpone the time of receiving, and consequently of paying for the hedge. One man for whom we set hedge three years ago has become insolvent, and his land has been sold under execution; another has died; others have sold their lands and removed—some of them making provision for the final payment on completion, and others none. These we find to be some of the troubles and responsibilities of hedge growing."

Other letters of enquiry were read from Michigan and Missouri, which have had, or will have the attention desired. Prof. Turner authorized me to promise that this report would be followed by a communication from him in the next number.

LOGAN SLEEPER.

[Written for the Valley Farmer.]

TO MAKE A RAT-PROOF SMOKEHOUSE.—The rat is a great pest in the barn, the cellar, and especially in the smoke-house. From the latter you may exclude him at a trifling cost by observing the following directions. In the first place, build your house of brick or stone, excavate the earth within the foundation, to the depth of 12 or 15 inches. With rock well broken, (such as is used for McAdamising), spread the broken rock six inches deep, and thoroughly saturate with thin lime and sand mortar. When this becomes hard add another coat of rock 8 inches thick and saturate as before. Then tin the bottom and edges of the door, and the protection is complete. Three wagon loads of rock, one of sand and ten bushels of lime, are sufficient for any ordinary sized smokehouse. J. M.

VERANDAH RIDGE, St. Louis Co., Mo.

The Vegetable Garden.

Calendar of Operations for March.

VEGETABLE GARDEN.—This is proverbially a busy month in gardens; much, however, depends upon the state of the weather and the soil. The principal crops should be put in as early as possible. A few days' delay at this time is frequently the only difference between failure and success. Those, therefore, who have duly attended to the draining and aerating of the soil will now reap the advantages of their foresight, in the facility with which they can crop the ground, as there is no gain in cropping before the soil is in a fit condition. Clayey loams require especial care; if they are tramped upon or disturbed while wet, the ground will not recover its friability during the season, but will remain lumpy and crack open in fissures during dry weather, to the great injury of the plants growing in it.

Manure that is applied to early crops should be well decomposed, that its action may be concentrated and immediately effective. Premising that the ground has previously been turned over, the manure should only be lightly dug in; for early peas, horn carrot, parsley, onions, &c., this is a good method, but for crops that have to withstand the droughts of summer, the manure should be put in the bottom of the trench, not less than a foot below the surface.

Among other things requiring earliest attention may be mentioned salsify, onions, parsnips, spinach, turnips, beets, parsley, peas and potatoes; the two former must be sown early to get anything like a proper crop; for unless they get a good growth, before warm weather, they are severely checked, and onions are by this means frequently not larger than chestnuts.

All garden crops should be grown on the drill system; it is otherwise impossible to do them full justice in culture. A rake should never be employed in the preparation of ground for seed. *This as a rule.* Exceptions may be made in particular cases; but very much injury results from the prevailing system of breaking and raking the ground until it is as fine as powder. Our heavy rains beat such soils into a mortar consistency, and the sun bakes it into a hard crust, through which young plants cannot penetrate. Equally injurious is that old system, which is yet frequently recommended to trample in seeds. The great feature in cultivation is to keep the soil loose, more especially on the surface, as it retards evaporation of contained moisture, and admits the unimpeded access of the various agents of vegetable growth to the roots of plants.

With regard to the depth that seeds should be covered, it is a safe rule to cover them with a depth of soil about equal to their own thickness. This cannot always be strictly done, but it should be aimed at as near as possible.

Much difficulty frequently occurs in raising young crops in strong soils, from their liability to bake on the surface, as alluded to above. A slight covering of hay or short grass prevents the formation of this crust, and enables the tender plants to get through the surface; but, unless carefully watched, and the covering removed at the exact moment, the crop will run a risk of destruction from its being shaded and drawn up tender. The best material for this purpose that I have ever used is wheat chaff. A slight sprinkling over the drills will prevent injury from rains, &c., and, from its nature, offers no resistance to the future growth of plants. Of course, it is allowed to remain. I know of no superior method to insure a speedy germination and growth of small seeds, such as celery, carots, &c. Even should the weather prove otherwise unfavorable to their growth, a good crop of young plants may thus be rendered certain.

For early crops, the old adage of "sow thick and thin quick," is very appropriate. One pint of peas will sow a row of 60 feet; for late crops the same quantity will sow 100 feet. Carrot, one ounce will sow a row of 150 feet long; parsnip, half an ounce, 150 feet; spinach, cabbage, brocoli, cauliflowers, and their allies, will seed a bed of 40 square feet.

Those who have wet, late soils to work on, will find it a great advantage in their early crops of peas and beans, to plant [illegible] the surface, and throw a little soil over them with a spade. Thus elevated, the plants are in better position to withstand extremes either of wet or cold.

New plantations of asparagus, rhubarb, and horseradish may be made now. The soil should be trenched eighteen inches deep, and heavily manured. The former is most readily cultivated when planted in rows three feet apart, plants six inches apart. Two year old plants should be used, or sow seed and thin out as they advance.

Those who have the convenience of a greenhouse, grapery, or even a spare frame, may forward a few dozen pots of sweet corn, peas, or dwarf beans. By doing so, a dish or two of these vegetables may be had several days in advance of the regular crop. The corn should be put out in the ground when about a foot high, the peas and beans when grown three inches. Sow the peas thickly over the surface of the pots, and, when planting them out, separate them gently in the drill. They should be staked at once, which will protect them from frosty nights. The above is the most convenient method of forwarding peas. It is necessary that all crops thus forwarded should be thoroughly inured to the weather, by exposure several days before final transplanting.

RASPBERRIES.—The formation of young plantations may now be proceeded with. A deep friable soil, on a gravelly bottom, with the surface gently sloping, is the most suitable for them. On undrained and retentive sub-soils the canes never ripen so as to be sufficiently productive. They cannot flourish in soil destitute of lime. This mineral enters largely into the composition of the cane, and frequent applications of it are required to maintain a healthy and productive plantation. They should be planted in rows four feet apart and two feet from plant to plant, trained on trellis.

[*Horticulturist.*

THE MORGAN HORSE "GREEN MOUNTAIN 2D."

Foaled in 1834, the property of George Bundy. Sired by Gifford, grand sire, Woodbury, gr. gr. sire, Justin Morgan. Dam, sired by Woodbury, a dark bay mare of great beauty and action. This horse is 14 1-2 hands high, and weighs 1,100 lbs.; color, deep bay. Mr. Bundy sold him, when four years old, to Daniel Gay, of Stockbridge, Vt., who kept him till he was four years old, and sold him to Hiram Twitchell, of Bethel, Vt., and he sold him the same year to John Woodbury, of Bethel, Vt. Mr. Woodbury, sold him to Silas Hale, of South Royalston, Mass., who kept him till 1855, who sold him to a stock company in Williamstown, Vt., where he is now owned. Mr. Hale took him West in 1853, and he received first premiums at the several State Fairs of Kentucky, Ohio, and Michigan, and in 1854 he received the first premium at the Vermont State Fair, at Brattleboro'. He has also taken several other premiums. He is a horse of great muscular development and remarkably nervous, spirited action.

Stock Raising Department.

HOG DISEASE.

During the last year or more a very destructive epizootic has prevailed among the hogs throughout considerable portions of the Ohio Valley. From the sudden and great fatality which attends the disease, and its similarity, in some respects, to the cholera in the human family, it has been called the hog cholera or plague.

It is a little remarkable that when such immense numbers of valuable animals have been so suddenly swept off by this disease, that so few men of science have taken upon themselves the duty of investigating its cause and character, with a view to find out a remedy or preventive.

The accounts that have reached us of this disease, have generally been confined to the hogs fed at distilleries, but whether it had its origin in these establishments or not, we have no authentic information. That fatal diseases should originate among swine, kept as they are at these places, is not at all to be wondered at; the wonder is that they are not more frequent. But whether this disease had its origin in the distilleries or not, it has not been confined to them alone, for it has prevailed on many of the neighboring farms throughout the infected districts, and large numbers of valuable animals have been lost by it.

The only description of the character of this disease, that has reached us, is from the pen of George Sutton, we presume an M. D., of Aurora, Ind., which appeared in a late number of the Cincinnati *Gazette*. He appears to have made quite a thorough investigation by repeated examinations of the internal organs of the diseased animals, and finds that their appearances are various, as the symptoms are different. From an examination of forty-seven hogs that died of this disease, he scarcely found two that presented precisely the same appearance.

We have not the space to give the full details of these examinations, but we will furnish our readers the most important facts, with some suggestions touching the means of prevention and cure.

So far as information has been received by Mr. Sutton, the disease has prevailed in Indiana in the counties of Ohio, Switzerland, Ripley, and Dearbon. In Ohio in the counties of Montgomery, Butler, Hamilton and Clinton. In Kentucky in the counties of Kenton, Boone and Gallatin. We have heard of some instances where it has extended to the interior among a considerable number of farmers.

To give an idea of the number of hogs that have died, the losses at the following places are stated: At Ingraham's distillery, from the 1st of August to the 24th of October, 1,285 had died. At the distillery in Petersburg, Ky., since the 18th of October, 2,576. Mr. Pate, of Rising Sun, lost 500; Mr. Slumer, of Covington, 500; Messrs. Gaff, of Aurora, 4,546. At New Richmond, since the disease made its appearance, 10,435 have died, and in the vicinity of Aurora, 6,000 have died, making an aggregrate, so far as accounts have been received, of 60,000 hogs, valued at $300,000, and when fatted would have been worth $650,000.

From experiments made at Aurora, it is stated that the disease is more violent upon hogs that are fed on dry corn than those fed on slop. The average number that died in the pens, that had been fed on slop, was from 33 to 55 per cent. The average number fed upon corn, that died, is put down at from 60 to 75 per cent.

It is proved that the disease is contagious, and that the latest period of contagion is about thirteen days. It is also ascertained that the pens in which diseased hogs have been in will retain the infection, in warm weather, for more than four days, and probably from ten to twenty. Another very important fact has been ascertained: that the hog is not subject to the disease but once. Not an instance has been noticed where one has been attacked the second time.

In one instance, 100 hundred hogs were put into a pen by themselves and fed on corn and water for thirty days, during which time they all remained well. They were then put into pens with diseased hogs, and in fourteen days the disease made its appearance among them. Dr. Sutton innoculated eight hogs with blood from diseased parts of hogs that had died of this disease; in fourteen days they were all unwell, and one died, and all died within a week of each other, with the exception of one, which recovered.

Although this disease proves so infectious to hogs, it seems very conclusive that it cannot be communicated to the human system. While dissecting the diseased hogs, Dr. Sutton several times wounded his hands, which readily healed without any extraordinary inflammation, and the men who were constantly at work among them were not affected by the disease.

As a preventive, it is suggested that, diseased hogs should at once be separated from the healthy ones, and when disease is prevailing in a neighborhood, farmers should keep their hogs from running at large, as the disease has been clearly traced in extending from farm to farm.

To destroy the infection in a pen, it is recommended that the parts be well washed with a strong solution of sulphate of iron, nitrate of lead, or sprinkled with chloride of lime.

As a remedy, laudanum and linseed oil is recommended, when the disease assumes the form of diarrhœa or dysentery. Some farmers speak highly of a solution of soap, in which sulphur is mixed.

Mr. Rann, residing in Ripley county, Indiana, states that he lost a large number of hogs with the disease last fall. He drove the remainder of his stock into a neighboring creek, and made them swim about in the water, and fed them in the water, and that, after receiving this treatment, the sick hogs rapidly recovered, and he lost no more.

Light upon this subject, can only be obtained by intelligent, careful and thorough examination; and we hope that wherever the disease occurs, persons qualified for the task, will thoroughly investigate it and give us the result.—If the same pains had been taken in every neighborhood where the disease has appeared, that Dr. Sutton has taken, much valuable information could have been derived, which would prove of vast importance to the public.

[Written for the Valley Farmer.]

THE HORSE.

Having introduced this subject in a former number I propose to speak first of *raising* horses for the farm, and in doing so it will be proper in the first place to consider what general features are requisite in the *mare*, for the production of such animals as may be deemed most desirable in this capacity.

The labors of the farm although diversified, generally require considerable strength, as well as endurance in their performance. For this reason the farmer wants horses of good size, and in order to produce them it becomes necessary that this quality should, in an eminent degree be possessed by the mare. Sixteen hands is very fair height, but two or three inches more for some purposes is by no means objectionable.

I am no advocate for size, however, when it is the result of unnatural growth, as such animals are almost invariably deficient either in sprightliness or constitution, perhaps both.—Upon this subject I shall speak more fully in treating upon the correct principles pertaining to breeding. Some mares breed large, and will produce colts from horses either large or small that will be (when grown,) larger than themselves. This is an invaluable quality in a mare. There are others just the reverse. Some mark their own character and features, very strongly in their offspring, others invariably breed after the horse, and not unfrequently instances are found in which a striking resemblance is traced to some remote ancestor, it may be, on either side.

It is a general rule and in many respects a true one, that "like produces like," but there are some contingencies upon which this may depend. There is, perhaps, more certainty in producing quality, form or disposition, when these characteristics may be traced through a long line of ancestry, than there is in expecting it simply because the given quality may exist in a remarkable degree in the animals to be bred without regard to their pedigree. To illustrate: some years ago there was a noted race horse in Virginia, which, during his whole life never got a colt that was ever a successful competitor upon the turf, and the reason ascribed was, that the said horse possessed a cross of impure blood, which was invariably inherited by his offspring.

There are some marks which rarely fail in indicating a good brood mare, viz: in addition to size, she should have a body, long, large and loose about the flank. A considerable space between the last rib and the hip bone. The hips wide and bones large. One of this description might be considered a model animal for mules and large horses. If in connection with the other features mentioned she has a fine head, ear, neck and limbs, by a proper selection in the choice of a stallion we might expect almost any kind of colt we might desire. The period of gestation with the mare is eleven months; but I have known instances in which the foal has been carried twelve months and even longer. Some mares invariably go from twelve to fifteen days over their time, (11 months,) and in such cases the colt when foaled, looks as if it might be almost a month old. It is generally large, thrifty and grows right off. This, then, is another desirable quality in the mare. If the mare foals, (as many do,) before the eleven months have fully elapsed, the colt is generally weak and has not a full and perfect developement The best time for colts to come depends somewhat on circumstances, but as a general rule about the 1st of April is a good time. An early colt being larger and less delicate will go through the succeeding winter in better condition than a late one. A colt, stunted when young, may be so much injured that it will never attain its natural and original beauty, however well it may be treated in after life.—Some difference of opinion is entertained respecting the age at which a filly should be put to breeding in order to affect her after value as a brood mare. My own opinion is, (I think substantiated by common sense,) that a great error is too frequently committed, both in breeding and breaking animals entirely too young, thus impairing the constitution and producing premature old age.

Particular care should be taken of the mare, during the period of her pregnancy. She should be well fed but not kept too fat, exercised regularly, indeed moderate working nearly up to the time of foaling is rather a benefit than otherwise. Care should be taken, that she may not be let run during the winter, where there is a danger of getting upon ice or otherwise straining herself, thereby causing the loss of the colt. If a mare has lost her colt, she should be removed, (if running with others,) for a few days, as sympathy sometimes causes the same thing to occur to them.

After the colt has been foaled, (in proper time,) see to it that the mare is generously fed, as attention in this respect will be well repaid by the thrift produced in the colt and the good condition of the mare. In the selection of a stallion to breed to, considerable judgment is required, and particular reference should be had to the prominence of such qualities, as it is desired, should be transmitted to the offspring. On this point I shall particularize, perhaps, in my next communication, and for the present only make some general remarks. Power and bottom are qualities of the highest importance. Symmetry and style of action are of course desirable and that the animal should be entirely free from defects, imperfections and blemishes, are considerations which materially affect the value of the progeny. Much depends upon the treatment a horse receives, as to whether he will breed well or ill. Of all other features in the mismanagement of horses, probably that of crowding an animal beyond his strength is the most injurious. If a horse begets fifty colts in a season he has done well, as well as any horse ought to do. An inferior horse judiciously managed in this respect may produce good colts, while one decidedly superior, yet over-taxed will rarely sustain a creditable reputation. Some commit a palpable error by putting up and pampering a stallion during the season, and more than this keep him entirely without exercise, whilst the remaining part of the year he is perhaps worked hard, or at least permitted to exercise freely, and is oftentimes very thin in flesh. I am decidedly in favor of having all harness and gear horses broken to work. They are then easier managed and may be advantageously exercised at any time, besides being occa-

sionally useful as work horses, and as an additional reason, the colts produced by such horses are generally regarded as being more tractable than those of others. It is particularly important that horses should be groomed, fed, watered and exercised regularly and properly during the season.

A horse should commence the season in pretty good flesh, and be gradually improved as the time passes away, but it is not desirable that he should be made very fat. Judgment, observation and experience frequently teach useful lessons in these respects. These matters are worthy of consideration. Mark well their results. H.

Visit to the Farm of Captain Phillips.

We paid our friend Capt. A. Phillips, of St. Louis Co., Mo., a visit not long since, and so well were we pleased with what we saw, that we feel it to be a duty to give an account of it to our readers. We knew our friend to be a great lover of fine stock, and as we expected, found him the owner of as fine and pure blooded stock as is to be found anywhere.

Our attention was first attracted by some hogs of the pure Suffolk breed. One has but to see this breed, fed side by side with the common breed, to become convinced of its decided superiority. While the common breed are poor—complete land sharks—the pure Suffolks—fed at the same trough—are always fat and ready for the butchers stall, and do not consume more than one third of the food. We noticed one Suffolk sow, with a litter of nine living pigs, (three having died,) as beautiful as our eyes ever rested upon. We presume some of them will be for sale and we can recommend them as being pure. Captain Phillips allows his Suffolks to run out in a large yard, which we consider a good plan, as we believe that exposure to the weather, induces the growth of hair or bristles, in which respect this breed is deficient.

Our attention was next directed to the poultry yard, which we found to contain some of the finest varieties of fowls—the Dorking, the Cochin China, the Brahma Pootra, the Game fowl and several other breeds. Captain Phillips' opinion, formed after considerable experience, concurs with our own, that a cross of the Brahma Pootra and Dorking make an excellent fowl—as good as any—both as layers and for the table.

The Stock yard next received our attention, and we found it contained a number of thorough bred short horns, which Capt. Phillips has selected with great care, particularly on account of their fine milking qualities. They are certainly models of this breed, and must please the eye of every true lover of fine stock. We here give the pedigrees of some of them.

"Talbotia."—Roan, calved 1852, got by Elonzo, 471, out of Pandora, by Belgium 240, Daisy 2nd by Lillipus 642, imported Daisy, by Barnaby (1678,) by Admiral, (4,)by 2nd Hubback, (1323,) by Frederick, (1060,) by Hermit, (305,) by Punch, (531,) by Snowden's Bull, (612,) by Marteman's Bull, (422,) by Waistell's Bull, (669,) by Marquis, (2270,) by Dundas, (2743,) by Simon, (590.)

"Daisy 2nd," the dam of Talbotia was the property of the United Society of Shakers, of Mercer county, Ky., and they certify that she gave thirty quarts of milk a day, and that imported Daisy gave thirty four quarts a day. "She was one of the most extraordinary cows ever imported. She was large and beautifully formed, and lived to extreme age. She was nine years old when imported, and at the age of sixteen years and something over, had twin calves, both of which are now living."

"Music," red roan, calved June 1st, 1855, got by Valentine, 1060, out of Mundane, by Comet, 361, out of Music, by Orion, 780, out of Peoria, by Emperor 2nd, 474, out of Cathleene, by Orozimbo, 786, out of Fanty, by Mirandi, (4488.)

"Fanty 3d," roan, bred by the United Society of Shakers, Pleasant Hill, Ky., calved November 11th, 1854, got by Messenger, 704, out of Tye, by Bourbon, Dink, by Mercer, 701, Tulip, by Orion, 780, Pink, by Orozimbo, 786, Stately, by Comet, 355.

"Panoma," White, bred by the United Society of Shakers, Pleasant Hill, Mercer Co., Ky., calved in 1851, got by Ben Gratz, (252,) out of White Lilly, by Belgium, (240,) Snowball 1st, by Lillipus (642,) imported Splendor, by Symmetry, (2723,) Pomona, by Bedford, jr., (1701,) Mulberry, by Isaac, (1129,) by Whiteworth, (1584,) by White Comet, (1582,) by a son of Mr. Charges Kitt, (2179.)

"Kitty Clyde," roan, calved 17th day July, 1854 sired by Dr. Benjamin Warfields old Renic, (1,) dam, Pauline, by young Locomotive, gr. dam, by Duke of York, (1941,) g. g. by Othia, imported g. g. g. dam, by Oliver, (2389,) g. g. g. g. dam, Maudam, (4488,) g. g. g. g. g. g. dam, Mauandam, 4488, g. g. g. g. g. g. by Buzzard, (3253.)

Our visit being in the winter season, of course we can say nothing of the general management of the farm—but one possessing the enterprize and energy of Capt. Phillips, must do everything well. He has a large and thriving young orchard, and some of the best varieties of apples in the county, of which we had practical proof, both before leaving and after returning home. We enjoyed a very pleasant time with our friend and his accomplished lady, and feel ourselves well paid for the visit.

THE ARTICHOKE FOR SWINE.

N. H. R., of Berry's Lick, Ky., wishes to be informed through the *Valley Farmer*, whether the culture of the artichoke for feeding swine can be made profitable.

There are several varieties of this plant; but that known as the Jerusalem Artichoke, (*Helianthus tuberosus*) is considered the best. On suitable soil these may be grown to great advantage. The yield, ordinarily, is about three times greater than that of the Irish potatoe, and to this immediate climate it is better adapted than the potato. We have known of instances where the yield was from 1,000 to 1,200 bushels per acre. They are eaten by cattle horses, sheep, and hogs; but the labor of digging is considerably greater than that of the potato. Dr. Sam'l D. Martin, of Clark county, Ky., some years ago, planted his apple orchard with the artichoke, having two objects in view—first, to produce feed for his swine; and second, that the roots might afford an inducement to his hogs to *cultivate* the orchard. He succeeded most admirably in both of these objects. The roots yielded an abundant crop. By digging and estimating a certain quantity, the yield per acre was enormous, the precise quantity we do not now recollect, but they served as food for his hogs for a long time after maturity, and in rooting for them, the hogs gave a more thorough cultivation to the orchard than could have been secured by any other means, and without injury to the roots of the trees.

The artichoke is one of the plants, found, by Boussingault, to draw its nitrogen almost entirely from the air; hence, it it is one of the best crops to turn under before the tubers are formed, for the amelioration of the soil; although this advantage is not entirely lost when the crop is allowed to mature and be dug by the hogs. Hogs prefer the roots when boiled, but the advantages of this would not equal the labor of digging.

The roots should be planted as early in the spring as the work can be well done, much as the Irish potato is planted,—laying off the rows about four feet each way, and dropping one tuber in each hill and cultivating in the ordinary way. A light soil suits this crop best, but it will grow on almost any soil. We do not know where the seed (tubers) can be had, but wherever it has been introduced, unless special care has been taken to exterminate it, they may generally be found in the fence corners.

The Apiary.

MANAGEMENT OF BEES.

BY E. LINK, GREENVILLE, TENN.

Continued from page 57.

The stuff for the hives should not be less than one and a fourth inches thick, or if thicker the bees will be still less affected by the external changes of the air, a matter of much importance as it is seen that they raise their brood as near the center of the comb and as far removed from external influences as is practical. I always have glass in my caps to avoid removing them until full, and have them of various sizes, using the smaller as the season advances. It not unfrequently happens that bees will fill a small cap, when the season has progressed so far that they will make no commencement on a large one.—Rob the hive but once in a season, however good a one it may be for honey, for bees often become disheartened where their hive is oftener opened, but after being fitted up for winter supplies, as many caps may be taken off as they will fill, which depends upon the season and strength of the swarm. About every two or three years at most, select cold weather, and by letting down the bottom board, cut out all the old black comb to the cross stics. Every brood raised in comb thickens it and contracts the cells, dwarfing the bees, and being more or less abandoned, the millers gain easy access to them to occupy them with their eggs. To cut them out is to keep your bees renovated.

In the fall, all the hives should be examined, those having a good amount of bees, but short of honey should have a cap of honey placed on it, a very little will often save a swarm, and if not wanted will be promptly accounted for the next season. Those that are weak in numbers should be doubled together. By blowing a few whiffs of tobacco smoke into each hive and putting them together while thus sickened they will continue to harmonize and survive on much less honey than they would live upon separately. A small amount of bees to gather will do no good in summer and cannot withstand the winter. Strong hives will sometimes send out such excessive numbers in swarms as to leave a great deficiency in numbers at home. They apparently despond and seemingly loose their organization for work. I once had two hives in this condition at once, and for three weeks remained in their hives as in winter, having but little honey, when early in August I put them together—the moth having partly taken possession of the abandoned comb of one of them. They went speedily to work and in the fall were rich and in fine condition for winter. It often happens that the moth is blamed for the loss of bees, when they are effectually destroyed by some other cause, and the moth has merely taken possession of the ruins. If bees are kept in suspended hives of workmanship that leave no open joints or lodgments in old comb or otherwise for the worms to hatch and find protection in, and the causes that reduce the numbers too low counteracted, there would be very little complaint of bee moths.

Therefore, all late swarms, where the queen can be found and destroyed should be returned to the hives they left. Judicious doubling attended to, and late or excessive robbing avoided. All "bee-palaces" are humbugs and have no application to the nature or requirements of bees. To prevent them from swarming by extending their room is warring against their instincts and propensities. They require a degree of heat to raise their brood and work their wax which they can too seldom raise in the room of a "palace." If in sufficient numbers for the room they are in each others way and with bees as in legislation, large bodies move slow, and soon, some of the many causes that destroy bees, such as storms, disease, &c., will reduce the colony below the proportion of the space and the dwindling down of the stock will leave the palace an empty nuisance, and its owner minus the bees.

When two or more swarms come out at the same time all must have observed their great disposition to settle together. This gives a hint of some practical convenience, and by tying a bunch of old mullin heads, a not of a tree or something that nearly resembles a swarm of bees, when settled, to the end of a light pole, and placing it in a bush or tree in the swarming season, many if not all the swarms will light upon it, making it convenient for almost any one to lift them to the mouth of the hive, without being immediately amongst the bees, and they will nearly always return gentle or violent treatment, as you choose to offer it.

If the hive stands in the sun when hiving, it should be shaded until the bees go in and it is hung in the frame. Bees sometimes do much mischief by robbing each other, and when it is necessary to put a cap of honey on a weak swarm, care should be used to choose a time when few are flying out, and that none should be sticking on the outside or running from the comb. They may be generally stopped by closing the hive until evening, then letting the robbers out and remove the hive to a new place some distance off, or they may be immediatly stopped by setting some honey in front of the hive which they will speedily work upon instead of the hive they are robbing. It is a most excellent plan to place the hives during winter in a dry cellar, or any close out building. The temperature being more uniform and the greater want of light confines them to their quarters. They neither rob nor are tempted out by warm, bright weather, to be chilled and unable to return. From this cause swarms often suffer in numbers after the winter is well nigh passed.

Some seasons, from whatever cause it happens, many more swarms refuse to be hived and go off, than is usual. They may often be stopped, made to settle, and submit to a hive, by throwing gravel, sand, or anything else amongst them when on wing, that will disturb their organization and arrangement for their flight.—For they proceed with a system in all their operations, that it would be well, were it better imitated. I have had several swarms come off very early in the season, and bad weather immediately setting in, I saved them only by feeding until they could go out in quest of their own support, when they soon repaid me a fine percent for the little attention given them; and were more attention given to the management of bees, it would prove more remunerating in its profits, more interesting in its study, and profitable in its example than perhaps any other branch of rural production by which we are bound by unalterable necessity, to draw for our sustenance, the sweets from dame nature.

The Poultry Yard.

POULTRY.

Nearly every family can, with very little trouble, have eggs in plenty during the whole year; and of all the animals domesticated for the use of man, the common dunghill fowl is capable of yielding the greatest profit to the owner.

The *Hen-House* should be warm in winter, well ventilated in summer, whitewashed and kept clean. Roosts of sassafras poles are less infested with lice. Have no ground floor. Supply slacked lime, fine gravel or ashes, or burnt oyster shells, &c.

Feeding.—They will sing over Indian corn with more animation than any other grain. The hen must have secresy and mystery about her nest, watch her, and she will forsake her nest and stop laying.

[This is not always the case. We have known hens to come into the kitchen, when permitted, and lay upon the mats, or in the wood-box.]—Ed. Farmer.

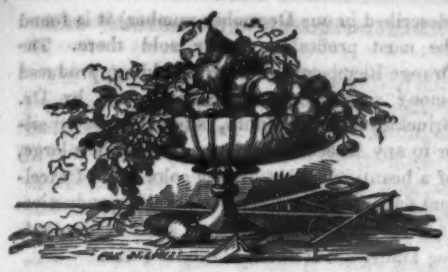
They eat less, if allowed to help themselves to what they want, than if fed in the usual way, for, in the latter case, each tries to get as much as it can, and thus burdens itself; but finding in the former case, that they have an abundance they eat but little, and that generally in the morning early, and in the evening before going to roost.

A farmer may keep an hundred fowls in his barn, may suffer them to trample upon and destroy his mows of wheat and other grain, and still have fewer eggs than the cottager who keeps a single dozen, who provides secret nests, chalk eggs, pounded brick, plenty of Indian corn, a few oats, lime, water and gravel, for them; and who takes care that his hens are not disturbed about their nests. Three chalk eggs in a nest are better than a single nest egg, and large eggs please them.

A single dozen fowls, properly attended, will furnish a family with more than 2000 eggs a year, and 100 full-grown chickens for fall and winter stores. The expense of feeding the dozen fowls, will not amount to 18 bushels of corn. They may be kept in cities as well as in the country, and will do as well shut up the year round as to run at large, with proper care.

A Fact.—Eggs the nearest to roundness, produce females, and those pointed at one end, always produce males.

For Fattening.—Boiled Indian corn, wheat and barley, are better than oats, rye or buckwheat. One-third is gained by boiling.—*The Orator.*



Horticultural Department.

Training Fruit Trees---Low Heads.

One great error committed by nurserymen and fruit growers is, in allowing their trees to head too high. The culture of fruit is beginning to attract increased attention, and some of the most intelligent cultivators have discovered this error. It is an error that should be corrected in the nursery, but nurserymen will be slow to adopt the improvement because trees with low heads will not pack for market so snugly as they will in the form of long stem switches. But if the evil is not remedied in the nursery, the orchardist should do the best he can to correct it. With the peach, this he can do because the trees are usually planted when but one year from the bud. When these are set in the orchard, the main stem should be cut back within 12 or 15 inches of the ground, so as to cause the head to branch within that distance. The apple tree should be cut back when one year from the graft to within 18 or 24 inches of the ground, so that none of the branches should put out more than two feet high. When this is not done in the nursery, it is better to procure small trees and put them into good ground and cultivate them well and cut them back to the height we here propose. A good head, if treated properly, can generally be forced out at the proper point. We have heard of successful growers of the peach who cut their trees off at the ground, and even sometimes repeat the cutting a second spring, in order to cause the tree to throw up a number of branches at the ground.

Trees trained with low heads are less likely to be thrown into an inclined position by the prevailing winds, as we now frequently see them. The fruit can be more readily gathered and with less liability to injury from falling, and the evil effects of the frost and sun upon the stem which prove so disastrous to many trees, and which alone, cause the attack of the Western borer, would be entirely avoided.

With low heads, the shade prevents, in a great degree, the weeds and grass from growing under the trees. It is true, while the orchard is young, it cannot be so thoroughly cultivated with a team as trees with higher heads. But what cannot be done with the team should be done by hand, or if each tree was surrounded for a distance of four feet with old tan bark, straw or hay to the depth of four inches, it would be of greater benefit than such cultivation as trees generally receive.

The method now practiced by nurserymen in cutting back the heads of dwarf pear trees will produce just such form as is desired for the apple and peach tree.

If the cherry tree could be forced to branch in this way from the ground, distributing the sap into a number of main channels, we believe the wood would mature better and the tree would be in a better condition to withstand the effects of our climate.

THE SMALL FRUITS.

The Climate within the parallels of latitude ranging a degree or two on each side of the Ohio river, is the most uncertain for the production of the common fruits, such as apples, pears, peaches, &c., in the United States. Within this range, the varieties of temperature are such as frequently to excite to the flow of sap and swell the fruit buds at undue seasons. This is followed by extremes of cold which destroys the fruit germs, and causes a failure in the crop about three years in five. Yet when we escape these calamities, the quantity of our fruit is surpassed by that of no other section of the country. North of this, range the continued cold weather holds the circulation in check until spring is fairly opened and the fruit escapes uninjured. South of this range, the temperature seldom falls so low, after the circulation of the sap has commenced, as to prove disastrous to the fruit crop.

In view of the uncertainty of these fruits with us, we would recommend the more general cultivation of the smaller fruits, which are seldom cut off by frost, such as the grape, currant, gooseberry, raspberry, blackberry and the strawberry. Of the mode of cultivating these, we have already given full and ample directions in former numbers of the Valley Farmer, but we propose again to speak brtefly of the following:

THE CURRANT.

This fruit, like many others, is too much neg-

lected in our gardens. Although it succeeds best in a colder climate, yet it is productive with us, and besides being a very valuable fruit in various ways at home, it has great advantages as a market fruit on account of its firmness. It will admit of carriage long distances.

The currant should be trained to a single stem, like a miniature tree. In winter or early spring, all superfluous branches should be carefully pruned out, and a good coating of manure spread in about the roots. The currant will thrive well in a partial shade, and should, when possible, be planted on a northern slope.

In addition to the old Dutch sorts, which are good, several excellent new varieties have been introduced. Those most highly recommended are the *Cherry Currant*, *White Grape* and the *Victoria*. The two former are the most productive, but the Victoria is valuable on account of its lateness.

At a late meeting of the Fruit Growers' Society of Western New York, Dr. Long stated that he found the *Black Currant* to make the best wine—equal to Port, and very much resembling it, and exceedingly valuable for medicinal purposes. The wine dealers in New York now buy all of this variety they can meet with, for the purpose of manufacturing Port wine.

THE GOOSEBERRY.

For the English sorts, our climate is found too dry and hot to succeed. Houghton's Seedling, combining the characteristics of the native with the productiveness of the English varieties, is a most valuable acquisition. It is a strong and vigorous grower, and when properly cultivated and trained it bears abundant crops. The plants should be trained high, in the form recommended for the currant. The branches should be thinned out so as not to interfere with each other, and the excess of young shoots should be kept down by pruning and pinching-in during the filling of the fruit. If the bearing branches are trained separately to a trellis and kept perfectly thinned, they present a very ornamental appearance, and the product will astonish the cultivator.

THE RASPBERRY.

There are many varieties of this fruit. The hardier kinds, such as the Common Red and Black Cap may be grown without any protection in winter, but the fruit is inferior to the true Red Antwerp and several other kinds. The Antwerp constitutes the chief market varity grown along the Hudson river for the New York market. Notwithstanding the plants require to be laid down and covered during winter, as (described in our December number) it is found the most profitable variety sold there. The Orange Raspberry—a native seedling, produced among several other excellent ones, by Dr. Brinckle, of Philadelphia, is found to be superior to any American variety. The fruit is large, of a beautiful bright orange color and of excellent flavor, while it is remarkably productive. It is also ten days later than some of the leading kinds, which also adds to its value.

THE BLACKBERRY.

Those who have not witnessed the effects of cultivation upon this fruit, can hardly conceive of the extent to which it is susceptible of improvement. More than thirty years ago, we procured from the woods, a large variety of the Blackberry, and planted the roots in a moist, rather shady situation. These plants bore for many years, not only extraordinary crops, but the fruit was nearly double the size of that produced in its uncultivated state, while its quality was improved in proportion to its increase in size.

Recently, several valuable new varieties have been introduced. Among these is the *New Rochelle* or *Lawton Blackberry*, a fruit of great size and rich flavor, very productive, and bringing high prices in the New York market. The Boston *High Bush* is another variety that has proved valuable in the Eastern States. *Newman's Thornless Blackberry* is a new variety, said to be valuable. The two last we have never seen. The former has been introduced into the West, and promises well. Of the Strawberry we shall have something to say in our April number.

FRUIT PROSPECTS.

Since our last issue the cold weather in many sections of the South and West, has reached a degree, seldom, if ever before known, and yet owing to the matured condition of the wood of most kinds of fruit trees and many favorable locations, fruit buds enough still remain uninjured to supply an ample crop. But should the warm weather continue such as has followed the extreme cold the buds must soon begin to swell and endanger the crop, unless the season opens unusually favorable, but we still hope for a fruitful year.

E. J. Hooper, member of the Cincinnati Horticultural Society, and formerly editor of the "Western Farmer and Gardener," is about publishing a work to be called the "Western Fruit Book."

The Weather—Its Effects on Fruit Trees.

The following table and accompanying notes have been furnished for publication by one of the most intelligent and observing Pomologists in the country, who has paid more attention to the effects of the weather upon fruits than any other cultivator with whom we are acquainted.

The observations of the writer confirms what we stated in our note in the February number upon the effect of the weather, this season, upon the fruit crop, although that note was written previous to the extreme cold here referred to.

A TABLE;

Showing the Character of Northern Winters near the Atlantic and Westwardly, compiled from Observations covering 17 to 30 years.

Names of Places of Observation.	Latitude of State.....	Years discussed for mean Temperature.....	Mean Temperature for November.....	Mean for December.....	Mean for January.....	Mean for February.....
Ft. Brady, Michigan.....	46½	31	32½	21½	17.2	16.2
Ft. Howard, Wis.....	44½	21	34.3	20.8	18.9	19.9
Ft. Snelling, Iowa.....	44½	35	31.7	16.9	13.8	17.6
Ft. Leavenworth, Kanas.	39½	24	40.4	29.8	28.	31.
Ft. Hancock, Maine.....	46	17	30.8	18.1	14.7	16.4
Ft. Constitution, N. H...	43	25	38.8	28.6	25.	26.2
West Point, New York....	41½	31	42.2	32.	28.3	28.8
Ft. McHenry, Md.....	39½	24	45.5	35.6	32.9	34.
Boston, Mass.....	42½	17	41.5	31.4	26.8	27.7
Springdale, Ky.....	38	17	44½	35.8	34.6	36.3
Pittsburg, Penn.....	40½	22	39.3	31.4	29.3	31.2
Springdale, Ky., 1855-6.			49.8	34.7	21.1	28.4
Springdale, Ky., 1856-7.			43.4	30.2	21.*	

Monday, Jan., 19.—Shelbyville and Frankfort 27 below zero; Springdale and Washburn's, 24½ below zero; Columbia, Adair county, 26½ below; Jessamine county, 33 below zero.

Messrs. Editors:—Knowing how deep a concern many of your readers feel in the fate of the fruit crop, I send you a few lines showing the result of a careful examination made to-day throughout the orchard. The peach crop is the only one seriously affected; and, judging by what I have been enabled to see, there yet remains enough of bloom on the branches of most varieties to insure a fair crop (spring frosts favoring,) while some varieties appear to be principally killed off. Plums and the hardier apricots are unhurt.

There is a smaller class of your readers (the cultivators) who are not only interested in the fate of the fruit crop, but are professionally concerned in knowing how 22 1-2 degrees below zero in January, 1856, should have power to cut off the whole fruit, and yet the greater intensity of 24 1-2 to 27 below zero in 1857 fail to do any very serious harm.

If no other advantage to the world at large should result from the inclemency of the present winter, its action certainly throws light upon a subject which has long been considered a vexed question among fruit-growers; and that subject is, what degree of cold can the peach bud be exposed to and live. The prevailing impression heretofore seemed to be that greater cold than 12 to 15 degrees below zero was always fatal. Without ever having acquired very great confidence in any particular theory upon this subject, I have always inclined to the opinion that this destructive degree of cold was an indefinite quantity, the force necessary to kill being great in proportion inversely to the advancing stages of development in the fruit between that state of torpor and rest in which it exists in autumn and its full below in spring. That is, I believe that 26 to 28 degrees above zero will destroy the peach crop in full bloom, 22 to 23 when the petals are visible but closed at the points, 13 to 14 degrees when so much swelled as to make the points of the petals visible, whilst in its earlier stages this hardiness increases until, as we now experience, even 24 1-2 below zero fails to discolor the wood and does not fatally affect the crop.

In order to invite discussion and reflection upon this subject, I have compiled the accompanying table, giving the character of northern winters, from authentic observations and also the mean of Kentucky winters, together with the special temperature of the present and preceding winters in Kentucky. This table shows that, except at one station, January is the coldest month in the year; that in Kentucky, the winters 1855-'6 and 1856-'7 are greatly below the mean for Kentucky. There is however a marked difference, it will be perceived, between the two. November, 1856 was a growing month (five degrees warmer than the mean of the climate,) and I think it probable that we are indebted for the preservation of our present fruit crop from entire loss under exposure to a temperature 24 1-2 deg. below zero to that close resemblance which our winter of 1856-'7 bears to winter in a Boston climate, where, when the growing season ends, cold very shortly begins, and, once having come on is slow to depart.

L.

Springdale, near Louisville, Ky.

Illinois Horticultural Society.

A convention for the organization of a State Horticultural Society was held at Decatur, Ill., on the 17th of Dec., last. A large number of the most distinguished horticulturists of the State were in attendance. We are glad to witness this movement and hope that the horticulturists of other Western States will speedily form State Horticultural societies. They are of vast benefit to the inhabitants of a State. The fruits best adapted to the climate and soil of a State are made known, at the discussions of these societies, and the fruit grower may learn which are the best varieties to cultivate. There is no more pleasing nor profitable pursuit than

Horticulture, and every citizen should labor for its advancement.

The following is a list of officers elected for the first year, viz:

For President—Dr. E. S. Hull, Alton.

For Vice Presidents—R. W. Hunt, Napierville, 2d district; F. R. Phoenix, Bloomington, 3d do.; L. Shaw, Fremont, 4th do.; S. Francis, Springfield, 5th do.; Wm. Stewart, Payson, 6th do., Dr. Kile, Paris, 7th do.; J. P. Reynolds, Salem, 8th do.; A. Bainbridge, Jonesboro, 9th do.

Corresponding Secretary, O. B. Galusha, Lisbon.

Rec. Secretary, J. E. Starr, Alton.

Assistant Rec. Sec., F. R. Phoenix, Bloomington.

Treasurer, B. F. Long, Alton.

The society adopted a Constitution and By-Laws, and at once proceeded to business. We shall endeavor to attend all future meetings of the Society and keep our readers informed of its proceedings.

The annual meetings of the society will be held at the city of Springfield on Wednesday after the first Monday in January.

List of Peaches that have proved Adapted for Western Cultivation.

The climate of the latitude in which we write, when the crop is not cut off by winter or spring frosts, is better calculated to mature the peach in greater perfection than in the climate north of us. For instance, some kinds of peaches not remarkable for their good qualities when grown in Pennsylvania or New Jersey, prove with us "very good;" others, again, that are classed among the best in the Eastern markets are even superior with us. Indeed we do not know of any peach cultivated in the best sections north of us, that are not more or less improved when grown in Kentucky, or in parallel sections of the country, and south of us.

The *Early Tillotson*—a peach that originated in Western New York and for a time promised to be of great value as a market fruit, owing to its good size and excellent quality, combined with its early ripenining, but now north of us it is almost entirely discarded in consequence of the liability of its leaves and young branches to mildew. The Early Tillotson, Early York and several other of the earliest varieties of the peach which belong to the class without *glands*, and with leaves deeply serrated are liable to attacks of this disease, or fungus; but with us in favorable locations, on well drained or sandy soil the Early Tillotson and Serrate Early York have proved the most valuable market varieties being in eating order some days before any other kinds, and always commanding the highest prices.

In making up a list of a dozen or more kinds of peaches that we regard the best, we will leave still, a long catalogue that others might consider equally good, so that it is somewhat difficult to make up a small list that will be regarded best by every one. We will however give a list of varieties that we have found as good as any for market and for home consumption—arranged in their order of ripening.

Early Tillotson,	Livingston's New York
Troth's Early,	Rareripe,
Columbia,	George the Fourth,
Crawford's Late,	Crawfords Early,
New York White Cling,	Old Mixon Free,
Brevoort,	Druid Hill,

Heath Cling.

In planting peach trees, as we have before stated, they should always be planted at one year old from the bud. Medium sized, or small trees are better than large ones. This remark applies more particularly to the peach than any other tree, the wood, particularly, if the tree has been grown on rich soil and is large, immature and abounds in sap, and when set in the orchard the evaporation from the stem and branches is greater than the roots, during the spring and dry part of the summer, can supply and hence the tree makes a slow start. But with a small tree it is different. The wood is better matured and the roots are not so large and can be taken up with less injury. The top of the tree should be cut off to within twelve inches of the ground in order to insure a low head. Small trees treated in this way, if the soil is suitable will attain to greater size by fall than large, immature trees will.

During summer the growth of the young trees should be watched, and all interfering branches should be removed and others cut out or shortened so as to insure a well balanced, low, open head. For the peach, as well as all other trees, large holes should be dug in order to secure well pulverized soil for the young roots. The holes should be filled with good *soil*. No manure should ever be placed in contact with the roots of a newly planted tree, and however deep and large the holes may be dug the roots should never be set lower than they were in the nursery; nature has formed the roots just at the point where they can secure a due degree of heat and air; and to place them in the orchard as some have done, twelve inches below the surface of the soil, is doing the greatest violence to her laws. But many mistake the instructions for making large holes for trees, which are designed only to be filled with rich mellow earth, and think the tree must necessarily be set deep. This rule applies not only to trees but to all herbaceous plants—the cabbage, tomato, &c.

American Pomological Convention.

Continued from page 61.

PEARS WHICH PROMISE WELL.

Ott.—Mr. Reid said he had fruited it and considered it a very good pear. Mr. Townsend of Lockport, N. Y., said it was fair and good. The President considered it of very high quality. Mr. Walker did not speak so favorably of it—it was variable and apt to crack.

Stevens Genesee.—With Mr. Hodge it succeeds well and he considers it a fair pear. It was admitted by several members that it was liable to rot at the core. The President stated that Louise Prusse was identical; he did not consider it very good.

Vicar of Winkfield.—Mr. Field enquired if it was true that distinguished pomologists had recommended it as the best pear grown. The President explained that he had many years since expressed the opinion publicly, that if he was restricted to one tree, it should be this variety—not for its quality alone, but for its general good character. Mr. Field fully agreed with Mr. Wilder in this opinion. Mr. Walker remarked that the President had expressed his views also. On its own stock it made a beautiful tree. If he had a farm he would plant them for shade. He had one tree from which he should get, the present season, five barrels. They should be barreled like apples, and when wanted for use should be ripened in a higher temperature. If ripened in a cool room there will be but a few good flavored and many poor. He had them in eating from October until April, and could truly say with the President, that if restricted to one variety, it should be this. It bears well every year, and every other year an extraordinary crop, worth $1 50 per dozen. Several gentlemen spoke of this pear; some found great difficulty in ripening it.

Hosenschenck.—Dr. Buncklcy said this pear had been known some years. It is a native of Pennsylvania, and was described by Downing as the Schenck. Would recommend it as worthy of trial. Mr. Wearing, of Penn. pronounced it fine. Other gentlemen stated that with them it cracked. Recommended as promising well.

Philadelphia.—Dr. Brinckle wished to see this pear put on the list that promise well. It is as large as the Duchesse d' Angouleme. It sometimes cracks a little, but is a good pear.—Adopted.

Richards.—Dr. Brinckle said this was a good pear, and is supposed to be a seedling of Pennsylvania. Several gentlemen thought favorably of it. Messrs. Saul and Hover thought it rather premature to put it on the list.

Fondante Comisre.—Mr Reid recommended this pear as worthy of trial. Others had tested it and thought well of it. Recommended for trial as promising well.

Niles.—Mr. Berckmans thought this one of the best winter pears. It was received from France without a name. The President tho't it a fine grained, good pear. Mr. Reid thought it a good winter pear. Recommended as promising well.

(TO BE CONTINUED.)

Written for the Valley Farmer.

Rabbits and Mice Injuring Fruit Trees.

Messrs. Editors.—I have often heard the complaints of farmers and others, who have nurseries and orchards of small trees, that the rabbits in the winter destroy them by eating off the bark; and also that mice will, when there is snow on the ground, girdle the trees just above ground. I have heard many ways recommended for preventing rabbits and mice from injuring small fruit trees during the winter and spring, but I have heard nothing recommended that will effectually prevent them.

I will give, through the colums of the Valley Farmer, a mode of protecting young trees from all attacks of rabbits and mice. It is very simple and one that anybody can adopt without expense and with but very little trouble. It is, however, too late for it to be of any use this winter, but it will be in time for the necessary preparations for another winter.

In the first place, early in the spring, or so soon as the bark will peel, go into the woods where you can find pawpaw bushes, cut them around in circles, from about twelve to eighteen inches apart, then split the bark from one circle to the other and peel it off, leaving the pieces whole with the exception of the slit from end to end. Get the bark about two sizes larger than the tree they are intended to cover. Lay them away in some damp place, and in the fall or beginning of winter, take the bark and soak it in water, when it will become soft, or so that you can place it around the trees without breaking it. First remove the earth from about the base of the tree, say one inch below the level of the ground, then put on the bark and replace the earth, and you will find that no rabbits or mice will injure your small trees.

Yours, &c., A. A. Rudy.

Farmington, Mo.

The Home Circle.

ESSAYS ON HEALTH---No. 7.

THE STOMACH.

In what we say of the stomach reference is had to the digestive economy, or that wonderful system of arrangement, by which nutriment is prepared for the system.

First of all, then, we say the stomach must have healthy, nutricious food, at regular periods or meal times. When food is taken the digestive process commences which requires from two to five hours for its completion, usually between four and five. If anything is eaten during this time the process is checked. An absolute derangement occurs. It is a trial of strength and health of the stomach. After good, nutritious food, regularity in taking it, is the most important thing.

After the process of digestion is completed and the food passes out of the stomach proper a short period of rest should be given. An hour of repose at least it should have between every meal. Hence meals should be six hours apart, between which nothing should be taken, unless it be a draught of pure cold water. And it is quite as well to habituate the stomach to ask for no water save what is drank at meals. Food should be simple and coarse, unmixed with anything that shall irritate the stomach. These sharp, spicy, acrid articles with which condiments and much food is usually preprepared, should be excluded from the table of intelligent beings. They mar the peace and health of the stomach. All stimulants are bad. They are to the healthy stomach what they are to the healthy eye, vexatious annoyances, which in the end ruin it, if persisted in. Neither food or drinks should ever be taken hot, or very cold. Blood heat is the right temperature. Every degree above this is injurious. Intemperance in eating and drinking is the bane of civilized life. Let the life of the stomach be wisely ordered and great health and peace will be the result.

KNITTING.

We believe in knitting—knitting by hand. Our mothers and grandmothers were famous knitters. And such socks and stockings as they gave us! It would make our feet laugh to get them now. They were warm and they would last. Made of good double and twisted yarn—soft and smooth, knit with mathematical precision, your toes wouldn't drive through them the first time you wore them, nor hardly the first three months. And then your foot felt like a foot with them on. But these modern factory woven things—shaped as well for a horse's as a man's or woman's foot—thin as lace—frail as gossamer—a tissue of single-threaded, half-twisted yarn! What do they amount to? We beg all the mothers to teach their daughters to knit. It is a good way to make odd moments useful. It is a good way to make a family comfortable and healthy. I cannot bear the idea that my children will have to wear factory made hosiery.

IT IS NOT WORTH SAVING.

"It is not worth saving." So says the improvident housewife a hundred times a month. The meat that is left after each meal, the cold potatoes, the few vegetables, the crumbs and crusts of bread, the pieces of biscuit, the fragments of butter, the little fruit, and all the littles left in cooking and eating each meal, are not worth saving, she thinks. So the remnants of cloth, yarn, thread, twine, wool, flax and the many little things of that character she says are not worth saving. She has no rag-bag, for rags are not worth saving. Three cents a pound is too small a matter for her to count. The odds and ends of the beef, the pork, the mutton, the veal, the poultry are thrown away, for they are not worth saving she repeats, every time any meat is dressed, though they would make many very luxurious meals in the family every year. The scraps of cloth left in cutting garments are given to the fire, for to her mind they are not worth saving. Garments are seldom patched or darned, for when they come to holes they are not worth saving she declares, and so they go the way of all the earth very fast. Everywhere and at all times she lets all the littles slip through her fingers. She burns two candles when one would do; two sticks of wood when one would answer as well; puts in two eggs when one is amply sufficient; two ounces of lard when a half of one would be better; twice as much pepper, spice and sugar as is desirable; a third more coffee and tea than is best for taste and health, and thus while she wastes the substance, wastes the health and strength of her family. Put all the littles which an improvident wife needlessly uses, wastes and throws away in the course of a year together, and they would soon amount to a sum which would put a poor family in good circumstances.

Improvidence is the chief cause of poverty in this country. The wife's most efficient means of benefitting the purse of a family is by saving,

seeing to it, "that nothing is lost." The rule is that the wife makes use of the husband's earnings. There is quite as much in using well as earning fast. One need not be mean to be economical. The spendthrift is oftener mean than the economist.

This should be the housewife's rule. Everything is worth saving that is worth anything. This everywhere put in practice will make almost every house thrifty and soon fill the world with plenty.

A Good Example.

A lady of Webster county, Mo., whose husband is too much engrossed in the cares of his business to give much time to our cause, has nobly taken upon herself to solicit subscribers to the "Farmer." She has sent us a good list and has our thanks for it. In her accompaying note she speaks thus of the Valley Farmer:

"With us it has become the favorite of the household, and I do most assuredly think it should gain universal favor; for, as we advance in enlightenment, the *real* and *useful* should certainly supercede the futile and fictitious.—With this argument I shall introduce it to many of my lady friends, and I hope, before the close of the year, my humble efforts may be successful in obtaining many permanent subscribers to your list."

We hope that many of our lady readers will follow this example. We think it is a worthy one. Only think of ten, twenty or fifty families in a single neighborhood, visited on the first of every month with the cheerful face of the "Valley Farmer." How gladly they will all listen to the conversation of this earnest friend. This much may often be accomplished by a single lady. Let all our lady friends go to work and send us the results of their efforts.

SPEAK TO THEM.

Speak to that fast young man who twirls a cane, sports a watch fob, smokes a cigar, chews a quid of the Indian weed, drinks a brandy punch, cracks a joke at the expense of woman's virtue, breaks the Sabbath, laughs about his parents, profanes God's name, contemns religion and thinks crimes are smart jokes. He is in a bad way. He treads on a bed of serpents. He knows not his danger. Hail him and tell him better things.

Speak to that young woman who puts on aristocratic airs, who cannot see a pretty ribbon without a spasm, or pass a beaux without a paroxism of the heart, who jokes about serious things and loves the ball room better than the church, who drags her dresses in the mud and dangles her bonnet on her neck, who thinks more of a ruffle or flounce than of virtue, esteems whiskers above men, and paint and powder above good sense. There is a large vacuum in her heart and a hollow place in her head. She needs many words of good advice. She is a whited sepulchre, or will be soon if she is not checked in her ruinous course. Poor thing speak to her.

[Written for the Valley Farmer.]

Lessons for the Little Folks.

In the southern part of Europe, there is a beautiful country named Italy. There the poor are called peasants. Bees and garden fruits and silk worms make all their wealth. The first thing I remember is, that I was lying one spring morning in a window that looked out pleasantly on the sea side. The little closet in which I was, was shelved all around—a number of beautiful butterflies were floating about in the sunlight and on the shelves were crowds of disagreeable looking little grey worms that were all eating greedily. A pretty maiden came in presently who brushed out all the litter and laid fresh leaves on the shelves for the little worms to eat. She laid a fresh branch beside me on which there was a large dew drop. In it I saw myself as in a looking glass, and was dreadfully shocked to find I was a little dirty grey worm, like those around me with which I was so disgusted. While I lay moaning in my heart over this discovery a good mother moth came sailing down and settled herself beside me. Seeing my grief she said: What ails you poor little worm? I told her I did not wish to be a little grey worm; I wish to be a pretty maid, I said, or a gay butterfly. She answered: Wings are never given until work is done; the little maid is but a mortal worm, if she works rightly, she will have wings given when her work is done. These gay butterflies were all worms, and got their wings when their work was done. You shall have wings when your work is done. The mother moth finished her work and sunk to rest. The little maid came and pushed her out of the window as useless litter. But the words and works of the good do not perish with them. She had wrought a robe that a king was proud to wear, and her words have moved me to work diligently, that my robe may rival hers, and I know that I shall have my wings when my work is done. Little children, learn from the silk worm's story, that wings are never given until work is done. Knowledge and wealth are wings which will carry us to the places and things we want in this world. They are not given until work is done. Faith and the favor of God are the wings which bear us to heaven, but they are never given until the works of repentance and obedience are done. HETTIE HAYFIELD.

Editor's Table.

The Second Annual Fair for the Mississippi Valley.

The next great Fair for the Mississippi Valley will be held by the St. Louis Agricultural and Mechanical Association at St. Louis on the 4th Monday of Sept. The time fixed thus early to prevent conflict with other Associations.

To Editors of Newspapers.

This is the Third number of the Ninth Volume of the *Valley Farmer*. You have seen the many valuable articles which each number contains, and if you can conscientiously recommend our work to your readers, we shall esteem it a great favor. We are not now speaking to those who have had the kindness to notice it from month to month, (and there are many such) but to those who, from some cause, have neglected ever to bestow upon it a kindly word to their readers. The Valley Farmer comes in conflict with no paper in the Mississippi Valley. It is devoted only to Agriculture, and we unhesitatingly advise our subscribers to support their local papers. Our country papers are but poorly sustained—even those which are situated in the best counties; and we hold that it is *the duty* of every citizen to support those in his vicinity. There is no class of citizens whose labors are more arduous than the editors and publishers of newspapers, and there is no class that receives less compensation in proportion to those labors, or that bestows a tithe of the benefits upon society at large. There is a power of enlightenment in the public press, but we will not attempt to describe it. We say to the farmer, support your local paper, then subscribe for an Agricultural paper,—the best that is published.

RALLS COUNTY (MO.) AGRICULTURAL FAIR.—We learn from the Hannibal *Messenger* that the 4th annual Fair of this Association will be held at New London, on the 8th, 9th, 10th and 11th days of October, 1857.

One thousand five hundred and thirty-seven dollars are offered in premiums, and the premium list embraces over three hundred articles.

We saw the fair grounds of this association last year, and doubt whether they are surpassed by any of the county fair grounds in the State. Ralls county is a fine agricultural county and its farmers are some of the most enterprizing and wealthy in Missouri.

We are glad to notice that the *Valley Farmer* has been offered for the Dollar Premiums to be awarded, and we will try to make the premium worth many dollars to all who receive it.

We would be glad to publish the premium list, but if we do it for one county, we must for all, and our space forbids it. We published a list of the officers of this association for this year, in our January number.

OFFICERS OF THE MARION (MO.) AGRICULTURAL AND MECHANICAL ASSOCIATION.—*President*, John Nichols; *Directors*, C. R. Rogers, W. C. Anderson, Jr., Levi Barkley, R. W. Moss, A. B. Asay. *Treasurer*, Samuel D. South; *Secretary*, Thomas E. Thompson.

The next annual Fair will be held at the fair grounds near the city of Palmyra, commencing on Wednesday, the 14th day of October, and continuing four days. The fair grounds, which are owned by the association, are beautifully located, finely improved, and speak well for the enterprize of the farmers of Marion county.

At a recent meeting of the Board of Directors of this association, the following resolution was adopted, which has been forwarded to us by the Secretary:

Resolved, That N. J. Colman, Esq., be invited to deliver the Annual Address before this Association, at our next Annual Fair, on Thursday the 15th day of October next, and that the Secretary be instructed to make known to Mr. Colman this resolution, and to solicit his compliance therewith.

For the compliment of the resolution and the very polite letter of the Secretary which accompanyied it, we return our thanks. We will endeavor to be present on the occasion, but at this early day it will be impossible for us to give a decisive answer. We desire to attend as large a number of the fairs of our State as possible, and much will depend upon the order in which the fairs of adjoining counties will succeed one another. We would prefer however, to have some other speaker selected by the associations which desire to hear us, and if it is possible to be present, we can also have time to say all that we shall desire.

OFFICERS OF THE MONTGOMERY CO. (MO.) AGRICULTURAL SOCIETY FOR 1857.—A. C. Stewart, *President*; Thos. Morrison, *Treasurer*; Samuel T. Sharp, *Secretary*.

Directors—Thos. J. Powell, Benj. F. Sharp, Jacob See, Owen Smith, Wm. McCormack, E. G. McGinnis, Chas. G. Buchanan, John D. Anderson, Wm. S. Wyatt, Edward Bush.

Acknowledgements.

We know that it is late to tender our acknowledgements to those papers which so kindly noticed our lectures on Agriculture, last fall, and which were the chief instruments in securing for us large and intelligent audiences. But our motto is, "Better late than never." We know that our brothers of the press will freely forgive us, when we state that the cause of this delay has been protracted sickness, from which we have not yet entirely recovered. We are particularly indebted to the following named papers for the brotherly kindness which they extended to us.

St. Charles Reveille, published at St. Charles Mo. *Democrat*, (German) same place.

State Rights Advocate, Troy, Mo.

American Union, and *North East Missourian*, Louisiana, Mo.

Hannibal Messenger, Hannibal, Mo.

Palmyra Whig, and *Sentinel*, Palmyra, Mo.

Paris Mercury, Paris, Monroe Co., Mo.

Mexico Ledger, and *Audrain Signal*, published at Mexico, Mo.

HARROWING WHEAT.

It is the custom with many farmers to sow clover or grass seed in the spring upon their winter grain. Before sowing the seed, if an ordinary harrow with sharp teeth is run over the wheat or other grain, the crop will be materially improved by it, and the ground at the same time will be put in a much better condition to receive the clover seed than if sown without harrowing. Some might apprehend injury to the wheat by giving it a thorough tearing with the harrow. But select a time as early in the spring as the ground is just dry enough to work lively, and a good harrowing will prove as great a benefit to the crop as a thorough plowing or cultivating will to a crop of growing corn. If you are afraid to make the experiment on a hundred acres, try it on ten, or even one acre, and report to us and the world the result.

Whether grass seed is to be sown or not, the harrowing will pay many times the cost of the operation. If the work should happen to be done just before a shower of rain the effect is readily marked. We have tried it and know.

Grain on light, sandy land will be improved by running a roller over it instead of the harrow.

BEATTY'S WORK ON AGRICULTURE—ORCHARD GRASS—SUB-SOIL PLOW.—"A Reader" in Spencer Co., Ky., takes us to task because, in our list of books for a Farmer's Library, published in the February number of the Valley Farmer, we omitted to include Beatty's work on Agriculture. The omission is not so "strange" after all, although the list was made up by the Kentucky editor. The work referred to, is an excellent one on the Agriculture of Kentucky, but so far as we have been able to extend our enquiry, the work is entirely out of print.—The best of all reasons.

The same writer wishes to be informed whether Orchard Grass will do well sown with oats or barley, and what is the best time for sowing. In the February No. of the Valley Farmer for 1856, we gave full directions for sowing all the grasses commonly cultivated by the Western Farmer.

Orchard Grass seed is sometimes sown with grain crops, but it frequently results in failure, in consequence of the overshadowing of the grain and the exhaustion of the moisture by a luxuriant crop, and consequently we always recommend sowing the grass seed alone. The ground should be well prepared, as for timothy or flax, as early in the spring as possible. Sow One and a Half bushels of orchard grass seed and Three Pints of clover seed to the acre, cast seperately, and cover with a light brush or roller.

He is further informed that the best Sub-soil Plow in this market is that manufactured by B. F. AVERY. It is not only of proper construction, but strong and well made; and above all, it is "longer legged" than any other, and hence, may be run to a good depth. There is a steel sub-soil plow manufactured by Garret & Cotman, Cincinnati, Ohio, which is a good implement, and is well suited to heavy, tenacious, clay soils. The other suggestions of our correspondent are under consideration.

OFFICE OF THE VALLEY FARMER.—Our friends are again reminded that the Office of the Valley Farmer in Louisville, has been removed to 99 Third steet, near the Post office, over Mr. A. Gunter's Book Store. We will also mention that we have prevailed on Mr. Gunter to keep a constant supply of AGRICULTURAL BOOKS, where every kind of valuable work for the farmer may be had. There are many works in the collection that no farmer should be without.

NOTICES OF PUBLICATIONS.

AMERICAN JOURNAL OF EDUCATION AND COLLEGE REVIEW.—We are in receipt of the first number of the 3d volume of this valuable publication. To those who are interested in promoting the great cause of Education, it will prove a most efficient aid. It is published monthly in octavo form, each No. containing 100 pages. Its articles are from our ablest educational writers. Terms $3 a year. Address Calkins & Stiles, publishers, 348 Broadway, New York.

PETERSON'S LADIES NATIONAL MAGAZINE.—The January and February Nos. of this popular Magazine have been received. Its engravings, fashion plates needle-work patterns, &c., are excellent. It abounds in interesting, original articles. Ladies fond of periodical literature will be delighted with this magazine. Terms $2 a year. Address Charles J. Peterson, No. 102 Chestnut street, Philadelphia.

UNITED STATES MAGAZINE.—This is a magazine that deserves to be extensively patronized. It contains articles of great value. It deals with facts instead of fiction. We unhesitatingly recommend it to everybody. Its scientific and descriptive articles will please all who have intellectual appetites to be gratified. Terms $3 per annum; five copies $10. Address J. M. Emerson & Co., No. 1, Spruce street, New York.

Hall's Journal of Health.—We have frequently seen extracts from this excellent health journal, but have never had the pleasure of perusing it till now. The January and February numbers have been laid on our table. If the simple health rules which are given in this work were observed, how much sickness and suffering would be avoided. Published at one dollar a year, by W. W. Hall, M. D., 42, Irvins Place, New York, to whom all letters should be sent.

Mrs. Stephens' Illustrated New Monthly.—We are in receipt of Mrs. Stephens' Illustrated New Monthly. As its title imports, it abounds in illustrations. It is conducted by Mrs. Ann S. Stephens, a writer of much note. It is full of excellent, original articles and will prove an agreeable fireside companion. Address Mrs. Stephens' New Monthly, 126 Nassau street, New York.

The Knickerbocker Magazine.—Who would be without this sterling literary magazine? It is the spiciest of all the monthlies. He who would enjoy "the feast of reason and flow of soul" should at once subscribe for "Knick." One copy one year $3; two copies $5; five copies $10. Address Samuel Hueston, publisher, 348 Broadway, New York.

The Magazine of Horticulture.—We take pleasure in calling attention to this work. It richly deserves an extensive patronage. To those following horticultural pursuits it is invaluable. Each number is filled with interesting articles on horticultural subjects. Illustrated by fine engravings of fruits, flowers, &c. It is printed in pamphlet form, each nember containing 48 pages. C. M. Hovey author of "Fruits of America," is editor. Hovey & Co., Boston, publishers. Terms $2 00 per annum.

PURE CHINESE HEMP SEED.—We have just received from Kentucky, five barrels of pure Chinese Hemp seed, which we will sell low.

CHILES & CARR, Commission Merchants,
No. 58 Levee, St. Louis, Mo.

OSAGE ORANGE SEED.—A superior lot of Osage Orange seed for sale at 50 cts per quart, and at a reduced price by the bushel. H. B. HOWARD, Louisville, Ky.

CHINESE HEMP SEED.—A few bushels of genuine Chinese Hemp seed, for sale low, by
H. B. HOWARD, 6th st., Louisville, Ky.

SHORT HORNED CATTLE, &c.

3d ANNUAL SALE AT WOODBURN FARM.

I propose, some time in the month of May, by public auction, to LET 2 or 3 aged IMPORTED BULLS, and at same time and in same manner to sell about 20 head of young Short Horn Bulls and as many Heifers. Also some South Down and Cotswold Sheep. The herd from which these calves are bred will bear comparison with the best in this country or abroad. Calves sold at my last sale took 1st prizes at Lexington, Cynthiana, and Louisville fairs in this State, and the only one that went to Ohio took 1st prize at the Ohio State fair, at Cleveland. His owner is said to have refused $1,500 for him.

The day of sale will be advertised six weeks previous to its taking place, and at the time it is announced Catalogues will be ready for distribution, and may be had by application to Mr. L. W. Johnson, Spring Station P. O., Woodford county, Ky.

March '57, 2t. R. A. ALEXANDER.

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Fruit and Ornamental Trees.

Ellwanger & Barry, Proprietors of the Mount Hope Nurseries, Rochester, New York, solicit the attention of Nurserymen, Planters, and Dealers to the extensive stock now on their Grounds, which they are prepared to offer for the ensuing spring trade.

Their Nurseries were established eighteen years ago, and now occupy 400 acres of land, closely planted. The stock now growing is the most varied and extensive ever offered in this country, including

Standard Apples for Orchards,
Dwarf Apples on Paradise and Doucain stocks,
Standard Pears on free stocks, 1 and 2 years,
Dwarf and Half-Standard Pears on Quince stocks, 1 and 2 years from bud.
Standard Cherries on Mazzard stocks, } 1 and 2 years
Dwarf do on Mahaleb, } from bud.
Plums, Dwarf,
Peaches, Apricots, Nectarines, Quinces, &c.
Grapes, hardy, Native and Foreign varieties,
Strawberries, Gooseberries, Currants, Raspberries, Rhubarb and Asparagus, &c.

The collection of bearing Specimen Trees is the largest in the United States. Besides, the proprietors devote their whole time and attention to the business, and they are thus enabled to guarantee the correctness of articles sent out.

THE ORNAMENTAL DEPARTMENT

is equally complete, and comprises

Ornamental Deciduous Trees of all kinds, including the most elegant Weeping trees for Lawns and Cemeteries.

Evergreen Trees of all the most desirable species, and of all ages and sizes. More than a million trees are in a saleable state, and are offered low, in quantities.

Evergreens and Deciduous Flowering Shrubs, including almost everything suitable for the climate of the United States.

Roses—Upwards of three hundred of the most beautiful varieties, carefully collected during many years culture and experiment.

Peonies—About eighty superb varieties, including many new and very distinct sorts.

Phloxes—Seventy-five select and beautiful sorts, all of recent introduction.

Chrysanthemums—Fifty of the finest Pompone, or Daisy varieties, newly introduced.

CATALOGUES.

The following Catalogues will be sent gratis to all who apply post-paid and enclose a stamp to prepay postage:

No. 1—A Descriptive Catalogue of Fruits.
No. 2—A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c.
No. 3—A Catalogue of Dahlias, Verbenas, Petunias, and select green house and bedding plants.
No. 3—A Wholesale priced Catalogue for Nurserymen and dealers. no. 2, 1t.